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ABSTRACT

Following nine introductory papers that explain the work of various organizations involved in vocational training in Europe, the conference papers are organized around five themes: (1) vocational education and training and new technologies; (2) environmental education and training; (3) the changing role of the public and private sectors in vocational education and training; (4) internationalization of economic activities and tourism; and (5) noncommercial exchanges and vocational training. Representative papers include the following: "New Technologies and the Production Process: The Impact on Training" (Jean-Pieffe Jallade); "Environmental Issues in Vocational Education and Training" (Fabrizio Boldrini); "The Role of the Public Sector in Vocational Education and Training Systems" (Ulrich Hillenkamp); "Financing Issues of Vocational Education and Training" (Nikolai Petrov); "Internationalization and Professional Tourism: Vocational Training Responds to the New Needs of the Tourism Sector" (Colette Arnold); "Cultural Activities and Vocational Training" (Marina Lambraki-Plaka); and "Cultural and Recreational Activities: New Challenges for Training Institutions" (Aderito Alain Sanches). Summaries of the thematic units also are provided. Appendixes include the program, a list of participants, and two papers: "Technical and Vocational Education in Cyprus" (Likourgos Kappas) and "The Role of Education in Economic Growth" (Nikolaos Christodoulakis). (KC)

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UNESCO

UNEVOC

International Project on Technical and Vocational Education
Projet international pour l'enseignement technique et professionnel

Vocational Education and Training in Europe on the Threshold of the 21st Century

UNESCO-OEEK Symposium
23-26 September 1998, Island of Crete, Greece
in preparation for the
Second International Congress on Technical and Vocational Education

The **International Project on Technical and Vocational Education (UNEVOC)** is a project of the United Nations Educational, Scientific and Cultural Organization (UNESCO).
Its purpose is to contribute to the development and improvement of technical and vocational education in Member States.

UNEVOC works in three programme areas:

- *Programme Area A* deals with the international exchange of experience and the promotion of studies on policy issues. It is devoted to system development in technical and vocational education.
- *Programme Area B* is devoted to strengthening national research and development capabilities, that is to the development of infrastructures.
- *Programme Area C* concerns access to data bases and documentation, and strengthening of the UNEVOC network, in other words, with information and communication.

Within Programme Area A, UNESCO will convene the Second International Congress on Technical and Vocational Education in Seoul, Republic of Korea, in April 1999. Regional preparatory Symposia for that congress have been held in all regions:

- Asia and the Pacific: Adelaide, Australia, in March 1998;
- **Europe: Isle of Crete, Greece, in September 1998;**
- Arab States: Abu Dhabi, United Arab Emirates, in November 1998;
- Africa: Nairobi, Kenya, in November 1998;
- Latin America and the Caribbean: Quito, Ecuador, in November 1998.

The present report covers the European preparatory symposium held on the Isle of Crete, Greece, in September 1998.

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The **Organization for Vocational Education and Training (O.E.E.K.)** was established within the framework of the National Vocational Education and Training System. It has administrative and economic independence and is supervised by the Ministry of National Education and Religious Affairs. It aims at:

- implementing the targets of the National Vocational Education and Training System;
- establishing and operating the public Institutes of Vocational Training under the jurisdiction of the Ministry of National Education and Religious Affairs;
- supervising and controlling private Vocational Training Institutes;
- forming a regulative framework for the operation of public Institutes of Vocational Training, which are not falling under the jurisdiction of the O.E.E.K., regarding training maters.

The O.E.E.K. also acts as Greek focal point (UNEVOC Centre) within the worldwide UNEVOC Network.

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1 Preface

Over the last ten years, Europe has faced unprecedented political and socio-economic developments. The end of the cold war has opened new perspectives for economic as well as intellectual cooperation across the European region. Many European countries have decided to shift from centrally planned to market economies, with increasing roles being assumed by various groups of stakeholders. Economic interaction and exchange in Europe, including travel, is no longer restricted by the frontiers of the political blocks of the decades following the Second World War. The "Single Market" has been established among the Members of the European Union, and a common currency is underway.

On the worldwide level, information and communication technologies have changed not only the work environment of individuals, but also the quality and density of global communication and interaction. Markets, including labour markets, are becoming more and more global. International division of labour is developing further. In many national economies, the shift from the production of goods to the provision of services is obvious.

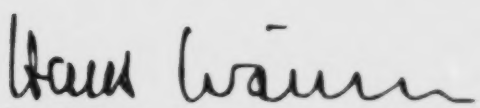
All these developments have an immediate impact on technical and vocational education and training. Policy makers have to adjust to rapidly changing parameters.

It is UNESCO's task and mandate to facilitate this process of adaptation. At its First International Congress for Technical and Vocational Education held in Berlin, Germany, in 1987, it was suggested that *"...an international plan of action be drawn up for the development of technical and vocational education and for promoting international co-operation in this field"*. In 1992, UNESCO launched its International Project on Technical and Vocational Education (UNEVOC). In the period since then, UNEVOC has systematically and effectively provided mechanisms and platforms for international exchange of experience and dialogue in technical and vocational education on the international as well as on the regional levels. This includes a variety of approaches and means, such as traditional print media, personal interaction in workshops and symposia, as well as communication and networking through Electronic Mail and the World Wide Web.

The Second International Congress on Technical and Vocational Education in Seoul, Republic of Korea, in April 1999, will focus on developing strategies for improving technical and vocational education in the early years of the twenty-first century. The congress is expected to provide a framework for UNESCO's Long Term Programme on Technical and Vocational Education to be launched from the year 2000.

In September 1998, the UNESCO-OEEK Symposium "Vocational Education and Training in Europe on the Threshold of the 21st Century" was held in an effort to provide a European perspective of the emerging challenges to technical and vocational education in the early 21st century.

Through this report, the valuable contributions delivered at this European Symposium by its participants are being made available to a larger community of teachers and trainers, of researchers and developers, of planners and policy makers in technical and vocational education and training. UNESCO invites you to join the debate, and to draw benefit from it for the advancement of the education and training system of your own country.



Hans Krönner
Chief, UNESCO-UNEVOC
Implementation Unit Berlin

2 Introduction and Overview

The 2nd International Congress on Technical and Vocational Education in Seoul

From 26-30 April 1999, UNESCO will organize, jointly with the Government of the Republic of Korea, its 2nd International Congress on Technical and Vocational Education in Seoul.

This congress will be devoted to "*Lifelong Learning and Training for the World of Work in the Twenty-first Century*". It will address central issues related to learning and training for the development of human resources – issues that confront both developed and developing countries in an age of rapid social, economic and technological change.

The Congress will focus on the following main themes:

1. The changing demands of the twenty-first century: challenges to technical and vocational education
2. Improving systems providing education and training throughout life
3. Innovating the education and training process
4. TVE for all
5. Changing roles of government and other stakeholders in TVE
6. Enhancing international cooperation in TVE.

Regional preparatory meetings

The Congress was preceded by regional conferences and symposia to focus the technical and vocational education experiences and needs of the countries in those regions. The summarized conclusions of the regional conferences and symposia will serve as contributions from those regions to the Seoul Congress:

- The regional conference for **Asia and the Pacific** was held in Adelaide, Australia, 25-27 March 1998.
- The **Arab States** held a Regional Conference from 01-04 November 1998 in Abu Dhabi, United Arab Emirates.
- The Regional Consultation for **Africa** took place from 23-27 November 1998 in Nairobi, Kenya.
- For the **Latin America and the Caribbean**, the regional consultation was held in Quito, Ecuador, from 23-27 November 1998.

The UNESCO-OEEK Symposium

The UNESCO-OEEK Symposium "Vocational Education and Training in Europe on the Threshold of the 21st Century" held in Crete, Greece, 23-26 September 1998, served for the European platform to prepare for the Seoul Congress. It was organized by the Organisation for Vocational Education and Training (OEEK) under contract with the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Participation

The Symposium was open to all countries in the "European Region", which, as defined for UNESCO purposes, includes Canada and Israel. In addition, the following Central Asian countries had been invited: Kyrgyzstan, Mongolia, Turkmenistan and Uzbekistan. The full List of Participants is to be found on page 97 of this report.

The Programme

Five Thematic Units provided the framework for presentations and discussions:

A Vocational Education and Training and New Technologies
B Environmental Education and Training
C The Changing Role of the Public and Private Sectors in Vocational Education and Training
D Internationalization of Economic Activities and Tourism
E Non-Commercial Exchanges and Vocational Training

Each of the units was introduced by a brief video clip on past and contemporary aspects of the theme with a futuristic outlook into its possible future dimensions. Keynote speakers introduced each of the themes. Other speakers highlighted selected aspects. Details are given in the programme (see page 95). Brief discussions among interested participants were held at the end of each session. Participants volunteered to summarize highlights of the presentations and discussions. The summaries are presented on page 85 ff.

Meeting of UNEVOC Centres

On the eve of the official opening, the UNESCO-UNEVOC Implementation Unit Berlin arranged a special meeting of participants from UNEVOC Centres.

The purpose of this meeting was to inform representatives from national focal points in the UNEVOC Network (UNEVOC Centres) about current activities and plans of UNESCO within the International Project on Technical and Vocational Education (UNEVOC).

The meeting was open to other interested participants, in particular from countries that are considering joining the UNEVOC Network. It gave the opportunity for face-to-face contact with UNEVOC network members in other countries of the region.

Mr Krönner, Chief of the UNEVOC Implementation Unit in Berlin, briefed participants about the UNEVOC Project and its Programme for 1998-1999, and about

The preparations for the Second International Congress on Technical and Vocational Education, Seoul, Republic of Korea, April 1999.

Mr Chinien, the Director of the Canadian UNEVOC Centre, explained the national UNEVOC network that he had established recently in Canada. He invited Mr Krönner to officially launch the Internet Web Site of UNEVOC Canada.

Finally, Mr Krönner presented the services rendered by UNESCO within the international UNEVOC Network, such as the international UNEVOC Web Site, the UNESCO-UNEVOC Electronic Mail Circulars, and the UNESCO-UNEVOC Electronic Mail Forum (E-Forum).

The Exhibition

Exhibition booths were maintained at the venue of the Symposium by

- the United Nations Educational, Scientific and Cultural Organization (UNESCO),
- the International Labour Organization (ILO),
- the European Centre for the Development of Vocational Training (CEDEFOP),
- the European Training Foundation (ETF), and
- the Greek Ministry of National Education and Religious Affairs.

At the UNESCO exhibition booth, delegates were not only given the opportunity to view publications and other products of UNESCO's programmes in education, they were briefed throughout the Symposium on the various services rendered to the worldwide network of UNESCO's International Project on Technical and Vocational Education (UNEVOC). Several countries decided to join UNEVOC immediately after the Symposium.

Cultural Event

After the official closing of the Symposium, the Greek hosts kindly invited the participants to see the site of Knossos.

3 Opening

3.1 The Organization for Vocational Education and Training
Mr Gerassimos Sapountzoglou

Mr Gerassimos Sapountzoglou is President of the Greek Organization for Vocational Education and Training (OEEK)

Mr Minister of National Education and Religious Affairs,
Ministers,
Representatives of UNESCO,
Ladies and Gentlemen,
Dear Friends,

It gives me great pleasure to welcome you to the Kalimera Kriti Hotel, in this beautiful corner of Greece, on the occasion of the symposium on "Vocational Education and Training in Europe on the Threshold of the 21st Century".

A few months ago, this symposium was a challenge for us. Today, it is a reality of which we are confident of success. The objective of this gathering of people from 50 countries in the wider European region that are represented at the level of UNESCO is to agree with a 'common perception' and a 'common approach' to the important issue of vocational education and training. It is clear that we do not seek the planning of a 'single policy' that will have a 'uniform application'.

Given the economic, social, and political differences which exist today among the countries that we represent, I do hope that we will be able to achieve, through dialogue, a series of conclusions and proposals for each thematic unit. We hold the responsibility for transmitting these conclusions and proposals to the Second International Congress on Technical and Vocational Education which will take place in Seoul, Republic of Korea, next spring. It is about the contribution of the countries of the European continent to that congress.

A presentation of the thematic units will be made later. With these few introductory words, I would like to welcome you, and to wish you both a pleasant stay and success with our symposium.

I would like to invite the Minister of Education and Religious Affairs, Mr Gerassimos Arsenis, to take the floor and declare the opening our Symposium. Thank you very much.

3.2 The Minister of National Education and Religious Affairs
Mr G. D. Arsenis

Mr G. D. Arsenis is Greek Minister of National Education and Religious Affairs. He has also previously been Minister of National Defence, Minister of Finance and Minister of National Economy

Mr Chairman of the Symposium,
Fellow Ministers,
Dear Guests,
Representatives of European countries
Ladies and Gentlemen,

I am delighted to take this opportunity, on behalf of the Greek Government, to welcome you. Thank you for your participation, anticipating the results of your work.

The significance of this symposium is defined by the following three factors:

1. This symposium concerns a timely issue for Greece, for the European countries, for the world: the issue of vocational education and training. Here in Greece, we are in the middle of the implementation of a large-scale reform, of a fundamental change in our educational system, which includes vocational education and training. We are striving to prepare our country, our youth, to successfully meet the challenges of the 21st century. We are striving to successfully meet and grasp the great opportunities that stand before us.

I am sure that, in the discussion that will follow, there will be an exchange of experiences of the various participating countries, as well as a productive dialogue, which will significantly aid the shaping of certain basic conclusions useful to all of us.

2. There is another reason which makes this symposium important. It is a symposium where all European countries take part; in other words, not just European Union countries, but countries of the wider European region. These are countries with different experiences and different origins, but with a common goal: the upgrading of vocational education and training.

This symposium offers a great opportunity to draw some basic conclusions based on the European experience from this sensitive area; to draw, perhaps for the first time, conclusions that will guide us as to how we should proceed together in a single direction.

At this point, I would like especially to welcome the presence of the international organisations.

3. The third reason, for which we attach particular significance to this Symposium, is that it is the preparatory symposium for the UNESCO Conference to take place in Seoul next year on the important issue of vocational education and training.

As you know, this symposium in Crete is organised jointly with UNESCO, and we can say that its conclusions will shape the "European platform" in Seoul concerning the issues of vocational education and training. This is our contribution towards Seoul. High priority will be given to issues relating to the fundamental changes that have to be made in vocational education and training.

We live in a revolutionary epoch. Things have changed radically and these changes have not only affected the economic, social and, in many cases, the political structures of countries, but, in addition, the entire system of general education and of education and training.

The basic constants of the 19th century, as well as those of this century that is coming to a close, cannot be the same for the 21st century. We are called upon to examine the new dimensions of the issue, to define the new framework within which we shall act with our eyes turned to the future and not to the past.

The element that overturned old balances and constants in the field of education and training was the change in the field of knowledge and technology. Running the risk of oversimplification, I could say that the economy, society and education have changed, and are still changing rapidly these days, because the relationships between know-how and technology, between engine and production system, and between man and machine have changed.

The economy, as we once knew it, the industrial economy, had its known attributes. Its main characteristic was its relative stability. Things did change, but they changed at a rhythm that moved with the change of generations. A person that became a civil engineer would remain a civil engineer throughout his life. A person that became an architect would remain an architect throughout his life. The electrician who knew his trade could remain competitive if he, throughout his career, occasionally brought his skills up to date.

Things have changed now. Technology is changing rapidly, and what was modern yesterday is obsolete today. We have estimated that, ten years after graduation, the technical knowledge of a university graduate will have become 80% obsolete. A graduate who wants to be current in his field, and efficient in his profession, will have to return to his area of knowledge and bring himself up to date.

But it is not just the rapidity of change that causes the conditions for reform in the system of education and training. It is also the nature of human presence that has changed in the field of production.

In the industrial epoch, things were simple and well-planned. Knowledge and science were accumulated in capital: in the big, specialised machine. The big, specialised factory machine, which operated on the Ford and Taylor models, embodied the entire wisdom

of our civilisation. The only requirement for the operation of that machine was its supervision by workers who had enough knowledge to follow instructions and could adapt their behaviour to the rhythm of the machine. Charlie Chaplin's film "Modern Times", exemplified that characteristic feature of industrial production, with the machine defining the rate of production and the workers adapting to it. That was the characteristic of industrial production.

This had its impact on the system of education and training. In the industrial age, what was required were a small number of selected scientists, who conveyed the wisdom of our civilisation from one generation to the next in the universities. They would develop technology for specialised machines, and determine in their corporations and industries the rhythm and the technology of production. It is for this reason that we have had, and continue to have in many countries, a finite number of people admitted to higher education. As for the rest, who were part of the production process and followed passively the machine created by the technological elite, all they needed was mass education of a "passive nature" to learn how to read and write in order to follow instructions and adapt their intellectual or physical abilities to the rates of production that had already been set.

That was also the reason for having open mass education at the primary and secondary levels: in order to produce a particular social and economic structure. The working-class and the middle-class were the constants of the past. Therefore, the system of education and training of the past was a stable system, one that was adapted to the needs of that epoch. Training was an extension of education that updated the knowledge of workers, scientists and specialised employees to the changes of times, which were not dramatic. This is all over now. The danger is that we often try to deal with today's reality and tomorrow's prospects with yesterday's mentality.

Today, this specialised machine has become obsolete. It has been replaced by smart software, and a specialist who is no longer the passive worker, but one who has a different dialectical relationship with the flexible machine. It is now required from this person to exercise critical thinking and imagination as well as to lead the machine in directions chosen by his own initiative and imagination.

Thus, the relationship between man and machine, man and production is reversed. If you like, we are turning back to old times, when the boss conceived and executed all his own work. His tools were at his disposal since he knew how to use them with creativity. So rapid changes in technology change the relationship between man and machine; with adaptable machines, and requirements for critical thought from the man, the worker. These are the new conditions. These change education. These must change education. These should change education and training.

What do we need now? To begin with, we must open the field of knowledge at all levels to all citizens. Not a pyramid of knowledge, but an education of "open horizons and wide choices". Open higher education to all those who want to follow that direction. We also need another brave change in education. From an education based on the transfer of knowledge from the book to the pupil, from the teacher to the pupil, we must proceed to an education that develops critical thinking and the personality, as well as the ability to make personal choices. There is information. Electronic libraries are present everywhere. The concern of the pupil in order to acquire knowledge does not have to do with the book. The concern of the pupil has to do with the making of right choices based on the abundance of information, often of poor quality, on the Internet. The pupil must select the information which is useful for him to synthesise the problem and come up with answers to the problems he wants to analyse.

The contemporary school, therefore, is no longer the traditional school of "passive knowledge transfer". It is the school of the development of the personality and critical thought. Some react to that, but the battles for the future have always been fought this way: between those who have grasped the message of the times and go forward, and others who fight at the rearguard. I do not know of any reform that was achieved without a rearguard fight. The characteristic of the rearguard however is that they are left behind. It is time for societies to understand that if they want to have a perspective and a future, the key for that future is found in the radical change in the field of general education and of education and training. Higher education open to all and "a field where knowledge and critical thinking develop" constitute the new education. Yet this is not enough. The relationship between education and training is different now.

In the past, the system was different. The educational system was the learning system in the school. One would learn at school, then enter the labour market; possibly attend a training programme to acquire expertise and specialization. Having acquired this specialization, one would be competitive in the production process, and this is how one would spend one's life. All this has changed. The dividing lines between education and training are not as clear, because the field of education contains elements of training, and further training without elements of education cannot exist. A different relationship exists today, between the three fundamental elements, "general education", "education" and "training" that we must differentiate. I believe that this must be one of the fundamental issues that this symposium must examine.

Finally, there is another issue that must be stressed. I have already mentioned it at the beginning. Science is changing rapidly. When we were young – and even earlier, at the time of Riccardo – we were taught at universities where the comparative advantages of countries were explained, and we knew that Portugal was expected to produce wine and that the United Kingdom would export textiles.

Today, the comparative advantages of countries can change within a week. What was the comparative advantage of Japan yesterday, has become the comparative advantage of Singapore or Korea today. Tomorrow, it will become the comparative advantage of other countries. This course will neither depend on the extensive accumulation of capital and machinery, nor on the change of physical factors. It will depend on inventiveness, on the daring thought of a worker in his warehouse, garage, or store, which will change completely the factors of production and will create something new. Therefore, comparative advantages change from one company to another, from day to day. In addition, skills change. Those who were trained in the past to repair cars can no longer repair them with today's technology. The spark plug will no longer exist and computers will repair cars. This has already started.

Therefore, lifelong training will be required. The citizen should have an ongoing relationship with the field of education and training. In order to stay current and competitive, the citizen will leave the place of production, re-enter the university, the school and the training institutes. Certain competencies and occupations that existed yesterday will become obsolete.

It is estimated that in the 21st century, on average, a person will have to change his career six or seven times. What this means for an employee is that, in order to keep up with the times, lifelong training should be the constant in his life. It will therefore be necessary for the system of general education and that of vocational education and training to change entirely.

We have started here in Greece the implementation of a daring educational reform. Changes in education cannot be completed within one, two or three years. They have a longer time-horizon. They will be gradually completed. One will learn from another's experience. A single recipe on how to set up a new effective educational system does not exist. Every country has its own problems, its own cultural heritage. Every country has a different starting point in its economic and social relations. Every country must give its own answer to its own problems. That is why I believe that the contribution of this symposium will not be made to the extent that it will present the "single European platform" for reform in the area of training, but to offer a diversified programme, varying by country, with converging objectives for the development of countries and for social cohesion.

As regards social cohesion, I would like to say a few words. Education and training are not just considered the necessary tools for meeting the challenges of production and the times. They are also the necessary prerequisites for maintaining social cohesion. The countries that will be left behind, that will not dare to make their big reform in education, run the risk of becoming countries with fragmented societies with social exclusions. Social exclusion will be avoided, unemployment will be combated, and social cohesion will be ensured only through a modern system of education that responds to the questions raised.

Today, for example, in the European countries, unemployment, to a large extent, is not due to the lack of economic opportunities. It is a structural unemployment, that has been created by a distorted educational system, which created educational and social splintering and lack of correspondence between education on one hand and the real needs of life and production on the other. In the new system that we want to develop, we must provide youth with all the means and competencies to be capable of grasping every opportunity and having a productive and efficient occupation in the new economies that arise. Therefore, unemployment will only reflect the inability of countries to implement modern educational systems.

So, the common goal is for modern education, for social and economic development, for social cohesion at the European and global levels, with differentiated mitigation approaches, based on the historical, cultural and political conditions of each country. We should not repeat the errors made in the field of economy to the educational field. There is no single educational policy at the global level just as, in my opinion, a single economic policy does not exist either at the global level.

The International Monetary Fund, a member of the United Nations and, at the same time, a very important economic organisation, has made the mistake of using the same recipe for every country and every case. To a large extent, the economic crisis that we face today at the global level is due to the persistence on promoting a single economic policy to diverse people and nations. UNESCO, on the other hand, has fought in the past for the differential approach to every cultural entity. In the field of education, we need common goals, but, at the same time, we need ranges for differential action for every social group and for every nation. In this way, each country will be able to deal with its problems from its own starting point.

I do hope that these issues will be extensively discussed here. I welcomed this symposium as the preliminary conference to the major one of UNESCO, and I would like to express a wish and an invitation on behalf of the Government. After the Seoul congress, the real work should begin; that is, the monitoring of the implementation of the conclusions of the conference. It would give me great pleasure to welcome you again in Greece, not to discuss what we should do, but to discuss what each of us does in his own country, and how we will all advance towards common goals and towards a common European vision.

With these words I declare the symposium open. I wish it every success.

3.3 The United Nations Educational, Scientific and Cultural Organization

Mr A. Parsuramen

Mr A. Parsuramen is Director of the Division for the Renovation of Secondary and Vocational Education at the United Nations Educational, Scientific and Cultural Organization (UNESCO)

Your Excellency Mr Arsenis, Minister of National Education and Religious Affairs,
Mr Sapountzoglu, President of the Organization for Vocational Education and Training (OEEK),
Mr Petrov from the International Labour Organization,
Colleagues from the European Centre for the Development of Vocational Training (CEDEFOP)
and from the European Training Foundation (ETF),
Mr Vassilikos, Permanent Delegate of Greece to UNESCO,
Delegates from the European Member States of UNESCO, from Canada, from Israel, from Kyrgyzstan, from Turkmenistan, from Uzbekistan and from Mongolia,

It is my pleasure to welcome you on behalf of the Director-General of UNESCO, Mr Federico Mayor, to the opening session of the "European Symposium on Technical and Vocational Education at the Threshold of the 21st Century". Mr Mayor sends his sincerest thanks to H.E. Mr Arsenis and to the Government of Greece for hosting this important event.

Let me also convey to Mr Sapountzolgu and his staff at OEEK UNESCO's profound appreciation of their efforts to make this symposium a reality and to have made it possible for us to meet on this beautiful island of Crete, whose heritage, as we all know, is composed of a rich mosaic of myth and reality. At this symposium on technical and vocational education, we may all be reminded that Talos, the legendary guardian of the island, who ran around it in order to protect it, was an early example of the resourcefulness and industry that is so necessary as we stand at the threshold of the 21st century.

Purpose of the Symposium

This Symposium takes place at a time when technical and vocational education in Europe is affected by major developments:

- The transition to a market economy in a number of countries in Central and Eastern Europe and in Central Asia;
- The change in the international division of labour; and
- The application of new information and communication technologies that have an immediate impact on work organization in many occupational fields.

In 1996, UNESCO's International Commission on Education for the Twenty-First Century, chaired by Jacques Delors, former President of the European Union, submitted its report entitled "Learning: The Treasure Within". In this report, the commission draws an alarming picture of the current state of secondary education:

"Secondary schools ... provoke a considerable amount of frustration. Among the sources of frustration are the increased and increasingly diversified requirements, leading to rapid growth in enrolments and overcrowded curricula ... There is also the distress felt by school-leavers who face a shortage of opportunities, a distress by an all-or-nothing obsession with getting into higher education. Mass unemployment in many countries only adds to the malaise. The Commission stresses its alarm at a trend that is leading, in both rural and urban areas, in both developing and industrialized counties, not only to unemployment but also to the under-utilization of human resources."

How can Member States respond to this challenge? What sort of solutions can our systems of technical and vocational education provide? UNESCO is currently developing an international forum for the exchange of experience and for the shaping of strategies in this field:

1. UNESCO held its First International Congress in Technical and Vocational Education in Berlin, Germany, back in 1987. Currently, UNESCO is preparing the Second Congress to be held in Seoul, Republic of Korea, in April 1999. This Symposium is expected to provide, inter alia, a European perspective of the challenges to lifelong learning and training for the world of work at the threshold of the 21st Century.
2. Based on its long experience in the field of technical and vocational education, and on its International Project on Technical and Vocational Education (UNEVOC), UNESCO is currently designing a long-term programme on technical and

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UNESCO

International Congress on Technical and Vocational Education
From Traditional and Contemporary Practices to Innovations

Vocational Education and Training in Europe on the Threshold of the 21st Century

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UNESCO-CEDEFOP Symposium
23-28 September 1996, Island of Crete, Greece
in preparation for the
Second International Congress on Technical and Vocational Education

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vocational education starting in the year 2000. The results and recommendations of this European Symposium as well as of regional meetings in the other world regions will constitute the background information upon which the deliberations of the Seoul Congress will be based.

The Second International Congress on Technical and Vocational Education

Providing lifelong learning and training for the world of work in the twenty-first century is the main thrust of the Second International Congress on Technical and Vocational Education which is being organized by UNESCO in cooperation with the Government of the Republic of Korea.

The acquisition of appropriate skills – both technical and social – is required to cope with the challenges presented by the evolving needs of the workplace. Education and training systems that respond adequately to these demands will contribute to the efforts to overcome the growing unemployment and marginalization of young people and adults in the industrialized as well as the developing world.

The Seoul Congress is expected to focus on developing strategies for improving technical and vocational education in the early years of the twenty-first century. Strengthening national development capacities, the international sharing of experiences and multilateral actions through networking are expected to constitute important components of such strategies. The Congress will bring together policy-makers from UNESCO's Member States, partners from intergovernmental organizations and representatives of concerned non-governmental organizations. Industry and labour associations will make specific recommendations on how we may address the challenges for technical and vocational education in the next century.

At this Symposium, you are invited to describe the problems your countries have encountered, and the innovations that have proved successful. Your conclusions will serve as contributions from the European Region to the Seoul Congress.

The European Region

I am happy to see the International Labour Organization and the European Union, with the European Training Foundation (ETF) and the European Centre for the Development of Vocational Training (CEDEFOP), participating in this Symposium.

We appreciate the significant contribution these institutions, in particular the agencies of the European Union, are providing to the development of technical and vocational education in the European region.

UNESCO's Global Mandate

UNESCO has a worldwide mandate and responsibility. In the European Region, we cooperate closely in particular with the European Training Foundation. The Conference on Technical and Vocational Education in Azerbaijan that UNESCO sponsored last September has been a particularly positive example of synergies created between UNESCO and the European Training Foundation.

UNESCO's focus is on international exchange of experience on a global level. We would like to encourage our network partners – the UNEVOC Centres – in Europe to actively commit themselves as partners in the international UNEVOC Network. We know how much other partners in the network – in particular from small Member States and from countries with less privileged socio-economic situations – will appreciate your cooperation.

UNESCO's Programme in Technical and Vocational Education

During the last years, UNESCO's UNEVOC Project has focused its efforts on the advancement of technical and vocational education in Member States in three programme areas:

A. International exchange of ideas and experience and studies on policy issues

UNESCO has initiated and published a series of studies on various aspects of national systems of technical and vocational education. These studies and events have focussed on issues such as:

- the role of technical and vocational education within national education systems;
- policy and legislation;
- vocational guidance;
- access of girls and women to technical and vocational education;
- technical and vocational education for rural development;
- future trends in adult and continuing technical and vocational education.

Most of these studies have been followed up with workshops and symposia for policy-makers, researchers and educators with a view to discussing strategies and shaping plans for the development of their systems. We are happy to note that this action has enhanced the debate and public awareness concerning the role of technical and vocational education in a number of Member States.

The most important event in this context will be the Second International Congress on Technical and Vocational Education which will he held in Seoul, Republic of Korea, in April 1999. This congress will be another effort to focus public attention on the need

for lifelong learning and training, and the current symposium is an integral part of its preparation.

B. Strengthening of national research and development capabilities

In many Member States, capacities for planning, research and development tend to deal with issues of general education only. Technical and vocational education is not always considered as an integral part of education systems; thus it does not necessarily benefit from national capacity-building efforts. UNESCO has carried out numerous seminars, training workshops etc. to bring together planners, researcher and developers in such fields as:

- cooperation between educational institutions and the world of work;
- methodology of curriculum development in technical and vocational education;
- international transfer and adaptation of vocational curricula;
- curriculum development for entrepreneurship;
- policy definition for vocational training in the informal sector;
- training of teachers and trainers.

Subregional networks have developed among these experts; they have produced guidebooks, exemplar curricula and other instruments that are now enhancing national capacities for research and development. Similarly, expertise and experience have been made available in such fields as equal access of girls and women to technical and vocational education, of application of modern technologies in technical and vocational education, of evaluation of vocational curricula, of assessment, and of educational and vocational guidance.

C. Facilitating access to data bases and documentation; strengthening the UNEVOC network

The globalization of markets, including labour markets, is a particularly challenging development for Europe. International exchange and transfer of knowledge is becoming more and more indispensable. UNESCO has therefore developed a worldwide network of focal points – known as "UNEVOC Centres" – to promote the exchange of experience and international cooperation in technical and vocational education. Today this network links 170 partners in 120 of UNESCO's Member States throughout the world.

- Within the last four years, UNESCO has reached more than a thousand experts in technical and vocational education worldwide through workshops, symposia and other events.
- We disseminate "UNEVOC INFO", the quarterly newsletter of the international project.
- Several thousand items from the "List of UNEVOC Publications" are mailed to partners in our network every year.
- Our UNEVOC Web Pages on the Internet are visited by more than 1000 users each month.
- Next week, UNESCO will officially launch the UNESCO-UNEVOC Electronic Mail Forum. This will bring together educators, researchers, policy makers and other people interested in sharing information in technical and vocational education internationally. UNEVOC already maintains electronic linkages with partners in more than 60 counties worldwide. You are all invited to join.
- UNESCO is publishing the series "UNEVOC Studies in Technical and Vocational Education". To date, eleven issues have been produced.

May I invite you to visit the UNEVOC stand here at the site of the Symposium. My colleagues will be pleased to inform you about the various publications and services related to technical and vocational education that UNESCO can provide.

Perspectives for 2000 and beyond

In 1996-1997, the UNEVOC Project was subjected to an external evaluation. Based on this evaluation and on the recommendations formulated by the International Advisory Committee of UNEVOC, the Director-General will present at the Second International Congress on Technical and Vocational Education a strategy on UNESCO's future role in the development of technical and vocational education. This strategy will be the basis of a long-term programme on technical and vocational education by UNESCO as from the year 2000.

The guiding principles of this programme are contained in UNESCO's "Convention on Technical and Vocational Education", which was adopted by the Organization's General Conference in 1989. Today these principles are as valid as they were 10 years ago. UNESCO and the International Labour Organization (ILO) are currently exploring the potentialities, fields and modalities of closer cooperation between both organizations in technical and vocational education and training. Only last week, the Government of Germany offered continued support for UNESCO's programme in technical and vocational education in the year 2000 and beyond.

Within the last few months we have held regional consultations with National Commissions for UNESCO on the Draft Programme and Budget for 2000-2001. These consultations have produced clear evidence for the need to attach higher priority to our programme on technical and vocational education:

In the African Region, it was recommended that more emphasis was needed on increased access to secondary

education, as well as on scientific education and technical and vocational education, which is perceived as an effective means of combating youth unemployment.

In the Asia/Pacific Region, the rapidly growing importance of technical and vocational education was recognized. Within the programme "Reform of Education", the highest priority was requested for technical and vocational education and the renovation of secondary education.

According to the Latin America and the Caribbean Region, greater attention should be focused on technical and vocational education and science and technology education. Technical and vocational education was once again listed 'first' among the areas of highest priority.

Your Excellency,
Ladies and Gentlemen,

We will be listening to your contributions and comments with great interest. They will guide us for the development of the long-term programme in technical and vocational education that UNESCO will present at the Second International Congress on Technical and Vocational Education in Seoul in April next year.

Let me express once again our gratitude and our thanks to our Greek hosts and organizers of this Symposium for their initiative, for their generous support and for their cooperation in the organization of this event.
I wish you every success in your deliberations over the next few days.

3.4 The International Labour Organization
Mr Nikolai Petrov

Mr Nikolai Petrov is Chief of the Technical Cooperation Team in Employment and Training of the International Labour Office (ILO) in Geneva

Mr Chairman,
Your Excellency,
Dear Colleagues from Eastern and Central European countries,

Mr Hansenne, Director General of the International Labour Office, asked me to convey his greetings to this very important meeting. ILO is one of the oldest specialized agencies of the UN family. It was created in 1919, and its major principle is looking for social agreement on matters concerning the field of work. All the questions in this field should really be discussed, and a solution which can satisfy both sides of production, employers and workers, should be found. The government is in the centre helping them to reach agreement if necessary.

Because our organization devotes all its time and resources to the field of work, training for the job and training for employment are among its major prerogatives.

In recent years we have been coordinating our efforts more and more, and cooperating with UNESCO, as it is becoming rather artificial to divide vocational education from vocational training. So real life is pushing us to joint efforts in training young and not so young people to enable them find a job, to be gainfully employed, to have a steady income for themselves and for their families. ILO is also involved in the preparation of the World VET Congress which will take place next year.

We are very glad to participate in this important Symposium which is going to deal with the complex problems of VET reforms in European and Central Asian countries. I am sure that the thought-provoking speech made by the Minister of Education this morning will help us to come to the right proposals and conclusions by the end of our debates as Ariadna's Thread helped Theseus to find the right way back from the Labyrinth when he visited this beautiful island some time in the past. I wish the Symposium every success.

Thank you.

3.5 The European Training Foundation
Mr Ulrich Hillenkamp

Mr Ulrich Hillenkamp is Deputy Director of the European Training Foundation

Mr Chairman,
Your Excellency,
Dear Colleagues,

The European Training Foundation attaches great importance to this congress on vocational education and training in Europe on the threshold of the 21st century. It will demonstrate once more the significance of investment in human resources in preparing for continuing economic changes in the context of globalisation, and the need for new/changed qualifications evolving from the labour market in order to contribute to the employability and adaptability of the workforce.

Another issue that I give priority to is the topic of environmental protection and the education and training issues linked to this.

I would like to thank UNESCO and the Greek authorities for organising this important event. It is also a sign of good cooperation between Member States, international organisations, private sector institutions

and the social partners. This type of conference has always been important for me, particularly as a medium for the exchange of experience in both formal and informal ways because lifelong learning applies to all of us. The conference represents, at the same time, a major step in the preparation of the World Congress on Vocational Education and Training in Seoul, and I am happy to serve as a member of the International Steering Committee to advise UNESCO in preparing this event. I am glad to see many familiar faces from our partner countries and from the international field. As this is an UNESCO conference, I am also happy to report on intensified cooperation between our two organisations.

Let me briefly introduce the European Training Foundation to you. The Foundation is one of the agencies of the European Union. It started its work in January 1995 in Turin, Italy, with the purpose of promoting cooperation and coordination of assistance in the field of vocational training reform in Central and Eastern Europe, in the New Independent States, and in Mongolia. In addition, the Foundation provides technical assistance for the implementation of the Tempus Programme for cooperation between the European Union and the countries of Central and Eastern Europe, the New Independent States and Mongolia in the field of higher education. In July 1998, the geographical scope of the Foundation's work was extended to the non-EU Mediterranean countries.

The Foundation's activities are entirely financed from the European Union budget. Currently, 130 staff from all EU Member States are employed. The Foundation also provides traineeships for staff from its partner countries.

An important aspect of the Foundation's work in order to ensure synergy and to minimise duplication is strong cooperation with other international and bilateral players. Let me stress here our close links with organisations such as CEDEFOP, UNEVOC Centres, UNESCO, the World Bank, ILO etc.

The main instruments the Foundation has developed to support the reform process in the partner countries are:

- *Policy advice:* for example, the provision of input to Phare and Tacis programming and the project definition process at the request of the Commission;
- *Project design and management:* for example, pilot or feasibility projects funded by the Foundation or jointly with other interested parties, or larger scale national and multi-country projects funded by the European Union's Phare and Tacis Programmes;
- *Cooperation:* including the joint development of projects with other donors; activities to promote coordination and complementarity between donor initiatives; ensuring an effective information flow on vocational education and training to all relevant parties;
- *Networking:* especially through National Observatories and the promotion of exchange of information and experience. At present, the exact nature of the Foundation's activities in the non-EU Mediterranean countries is in the process of being developed. The period 1998-2000 should be seen as a preparatory phase during which the Foundation adapts its expertise and approach to the particular needs and priorities of these new partner countries.

I am looking forward to a fruitful exchange of experience.

3.6 The European Centre for the Development of Vocational Training
Mr Stavros Stavrou

Mr Stavros Stavrou is Deputy Director of the European Centre for the Development of Vocational Training (CEDEFOP)

Minister of National Education and Religious Affairs,
Ministers,
Representatives from UNESCO,
President of OEEK,
Ladies and Gentlemen,

The quality and the mode of utilizing the human workforce at a micro- and macro-economic level will contribute much more to the development of the competitiveness of the economy and the multifaceted growth of society in general from now on. Therefore the role of Vocational Education and Training will become much more important than it ever has been. Moreover, the relevant choices that will be made today about what policies are to be followed, what methods and means are to be used, will definitely influence developments for many years to come.

Many of the topics of this conference are recognized unanimously to share many similar features at national and international level. But these do not necessarily imply just one thing in the choices that we make: they are equal alternatives. This is the reason why international information and mutual communication and collaboration are not only valuable but necessary, so that the experience from other countries can be systematically evaluated, creatively used, and suitably adapted to local circumstances.

Issues like cohesive lifelong learning, ensuring the quality and an acceptable relationship between cost and benefit for training, a wider use of the workplace as a conveyor of learning, and the certification of professional skills that have been acquired informally are only some of the things that have to be dealt with properly and carefully in Europe and all over the world.

For over twenty years CEDEFOP has been working methodically and contributing as a decentralized planning agency to create as cohesive a European policy as possible in the field of vocational training with the active participation of the social partners and national governments of the Member States of the European Union and with the European Commission. It is a documentation and reference centre for collaboration and for promoting research which attempts and achieves bringing politicians closer to researchers and to those who are daily occupied with training (teachers, students etc.), in order to bring about a fruitful collaboration regarding prospects.

Experience teaches us that focusing the efforts of an international collaboration on certain topics with converging aims makes it possible to find commonly acceptable methods and means to search for solutions and models to be followed. The choice of topics for the Symposium is very successful because they seem to have many points in common not only for our consideration, but also in how things, such as new technologies, tourism and the environment are dealt with beyond national borders. So the prospectives for an essential and fruitful discussion that will lead us a step closer to the International Conference in Seoul are very favourable.

I wish you every success!

3.7 The Commissioner of the European Commission
Mr Christos Papoutsis

Mr Christos Papoutsis is Commissioner at the European Commission. He sent the following message to the participants of the Symposium

Let me start by congratulating the organisers of the European Symposium on Vocational Education and Training. I believe that the discussions that will take place within the framework of the Symposium will substantially contribute towards the development of the relevant thinking on the issue and the recording of concrete ideas and proposals on this current and important issue. The discussions and the conclusions of the Symposium will indeed be a valuable contribution towards the preparation of the UNESCO Second International Congress on Vocational Education and Training to be held next year in Seoul. Unfortunately my commitments at the regular Session of the Commission of the European Communities in Brussels prevented me from taking part in the deliberations of the Symposium, in spite of the fact that I would very much like to. Still, allow me to share with you certain thoughts concerning the issue of vocational education and training. It is an issue of particular concern to us in the EU and, indeed, its priority related to our policies and actions is high.

Vocational education and training has acquired a particularly critical importance in the new environment that has been shaped by the globalization of production and the markets, the application of new technologies and the development of the information society since it is in the very heart of our efforts to reinforce the competitiveness and the development of the European economy and the creation of new jobs. I could state that such a vocational education and training which would respond to these new economic and social developments is indeed the key for the achievement of our broader economic and social objectives at the threshold of the 21st century.

Currently in the Commission of the European Communities a large-scale initiative is under way to support entrepreneurship and entrepreneurial spirit in Europe. This initiative encompasses the promotion of a series of specific measures that aim at the improvement of the environment within which the European enterprises develop.

A central issue related to this effort is to adopt the curriculum and to develop the appropriate training programmes so that entrepreneurship and a new entrepreneurial concept are efficiently promoted in Europe. Cooperation between universities, research centres and enterprises is necessary for the success of the above endeavour.

We attribute particular importance to the appropriate preparation and education of young people that will enable them to develop entrepreneurial activities. We also believe that the training of the businessmen themselves, the executives and the rest of the employees of the enterprises, is very important for the latter to be able to face the new economic and social realities. The application of the new technologies, the obligations stemming from the issue of the protection of the environment, and the internationalization of the economic activity render necessary the provision of appropriate information and training for the enterprises and their employees. This becomes even more necessary if we consider the rapid development of new forms of economic activity, such as electronic commerce, and also traditional economic activities, such as tourism, that have important developments and, now, new quality features, and that the provision of a broad range of services is required for them.

In order to be able to respond effectively to the great challenge posed by the development of a modern and efficient vocational education and training system, close cooperation and coordination between the public authorities is required at European and national level, as well as the active participation of the private sector

itself. The latter is one of the sectors which is at the centre of cooperation both with the countries of Central and Eastern Europe and the Mediterranean countries.

I believe that the European experience and our policies concerning this field can contribute constructively to the discussions that will develop in Seoul next year. I wish every success to the deliberations of the Symposium.

3.8 The Permanent Delegate of Greece to UNESCO
Mr Vassilis Vassilikos

Ambassador Vassilis Vassilikos is Permanent Delegate of Greece to UNESCO

Minister,
Minister from Cyprus, which we hope will achieve its accession to Europe soon,
Minister from war-torn Albania,
Mr Parsuramen,
Mr Sapountzoglou,

I had prepared a short speech, dear delegates, but the minister has absolutely covered what I meant to say. I would like to congratulate my friend Mr Arsenis, Minister of National Education and Religious Affairs, and Mr Sapountzoglou, the Chairman of OEEK, and his collaborators from the bottom of my heart on this essential initiative to bring together a number of academics in order to discuss the vivid issues of vocational education and training on the threshold of the 21st century.

After the rapid technological developments in the fields of information, communication and informatics as well as in the new occupations, if we indeed believe that the century we anticipate can be better and more just for everybody, we must all mobilize without delay, for the last 486 days remaining to the dawn of the 21st century by preparation, programming and renewal in the sector of education, and especially in the sector of vocational education and training. We see that the Greek Ministry of Education is moving toward this direction by organizing conferences such as this and through the very fundamental reform which is being established in education by the Minister.

I hope that all of you, together with science and your knowledge, will find Ariadne's thread in the beautiful Crete of Minos and the Labyrinth that will lead to the resolution of the problems of vocational education and training on the threshold of the 21st century. I also hope that the conclusions of this Symposium will constitute the platform for our discussion in the International Congress in Seoul. I extend my wishes for the success of the Symposium. This is the small speech I had prepared. Now let me say a few more words.

When I got to meet Mr Sapountzoglou at the UNESCO General Assembly a year ago, and he explained (because I didn't know, I must confess) what OEEK stood for, I realized that this is where the key for the future lies. We all know that we are searching for plumbers throughout our lives, while we can easily find doctors, scientists, lawyers etc.

This "looking for the plumber" provoked the following answer by Mr Sapountzoglou: " Yes, but consider this: the natural gas that will come to Athens demands the further training of the plumbers which will allow them to deal with the connections of natural gas since it is explosive". This is when I realized that what we are really dealing with: the new reality demands a new methodology through more specialized education. The minister said this morning that there are no spark plugs in the cars any longer and I believe that this is the key to the affair. They are not in the cars but they are in our brains. The Minister said that our attitude is of the 19th and the 20th century when we are already on the threshold of the 21st century, and that is where the problem lies. What he said is the essence of the problem. People are asked to intervene in the engine. We need critical thought and so the entire problem becomes a problem of education generally.

Let's not forget that UNESCO is primarily concerned with those countries where people cannot even read or write, who have not made it through this first stage, this privileged stage of ours of the 17th, the 18th and the 19th century. When we speak of globalization, we actually mean only a part of the planet. However, the change must emerge from somewhere. The Minister spoke specifically about how to achieve that change and about how unemployment is a result of education.

So, Minister, you have covered everything I wanted to say and I have nothing further to add, save that in those discussions about what is of concern to us among the intelligentsia of this world, the message, that we consider to be the message, is a result of the way that the message is conveyed in each case. Therefore, when the means to convey the message is oral speech, we arrive at monotheism. When the means of the message is printing, then socialism is what emerges. Don't forget that all the printers in the world were leftists. Now, when the message is conveyed through electrons, we don't know what the message is actually going to be.

There is no message in an abstract sense. The message is formulated through the means. I have denied the rubric of the author all my life. Probably, you will ask why. Do you ever call anybody a technologist? We have the plumber, the electronics technician, the electrician, the computer operator: all being specialized professions of technology. The same applies to the professions related to literature: we have the writer, the

translator, the poet, the playwright. This specialization in the professions is caused by new technologies. The history of literature is the history of technology.

From the moment we have trains, literature changes. From the moment we have aeroplanes, literature changes. From the moment we have faxes, then the erotic relationship between people who communicate through faxes rather than through telephones changes. And, of course, from the moment we have the Internet, we have occasions such as the tragic case we all heard about the day before yesterday.

That was what I wanted to say. I would thank Mr Sapountzoglou for inducting me into the history of vocational education and training. I know already that there are many directors here of higher education institutions, and I believe that therein lies the key against unemployment. Like my friend, Regis Debray, said, and at some place here we agree with Mr Arsenis, "the 21st century is going to be difficult, the 22nd is going to be easier".

Thank you!

3.9 The Organization for Vocational Education and Training
Mr Gerassimos Sapountzoglou

Mr Gerassimos Sapountzoglou is President of the Greek Organization for Vocational Education and Training (OEEK)

At first, allow me to identify a number of integral elements of the framework of our work.

There are five thematic units, which will be covered with respective presentations at the level of units and sub-units according to the distributed programme. There will be always sufficient time for discussion and reactions to the presentations. In addition, every evening, there will be a special meeting in a nearby room where any participant interested will have a chance to participate in the process of the drafting of conclusions for each thematic unit.

We start with the first, *"Vocational Education and Training and New Technologies"*. I think that it reflects one of the fundamental issues that we should discuss today, at the dawn of the 21st century. It is an issue that will be dealt with by the Seoul Congress. We will focus on the subject through a dual prism. New technologies and vocational education – vocational education and new technologies. It is true that a number of determining factors of the international economic environment generate important concerns and quests for vocational education and training.

Internationalisation, the integration of new technologies in the process of production, the resulting capital/labour substitutions, the change of production phases, the issues concerning the 'new production structures' and the 'new organization of labour' are all part of the first thematic unit. We have to reflect on what we should do as a result of the integration of new technologies in the production process. That is, how these technologies impose the revision of the vocational education and training specialities and their curricula.

Ladies and Gentlemen, due to new technologies, the phases of the production process need reform and change. For example, in order to manufacture a glass, we required, in the past, four production phases but, maybe now, we need two. What does this mean for the production itself and for the employee?

Therefore, the first part regards the influence of new technologies on vocational education and training. More specifically, in which dimension is the interplay between new technologies and vocational education and training expressed through changing standards of production and consumption?

From another perspective, the question is how can we use new technologies for vocational education and training. Already, in this room, the use of multimedia technologies, Internet, and various technological applications indicates that they can help us. How can the new technologies be used in order to make life simpler, both in vocational education and training and in distance training?

I proceed to the second thematic unit, titled: *"Environmental Education and Training"*. For sure, we must 'green' the curricula. The issue of adding new specialities and subject fields to the framework of curricula pertaining to the protection of the environment is vital. It is through the evolution and the development of economic activity that environmental policies generate not only knowledge but also professions. We should adequately prepare the workforce for these professions. We have already spoken of sustainable development. Today we must discuss the consequences of expansion in the area of the environment and the role of vocational training.

The title of the third thematic unit is *"The Changing Role of the Public and Private Sectors in Vocational Education and Training"*. You will soon discover that each thematic unit begins with a short film. The introductory film of this unit shows that traditional perceptions and relationships in the public and private sectors must be abandoned. It also shows how the 'partnership relationship' between employers, employees and the state, within the framework of a common agreement, must show us the way to make vocational education and training more efficient in accordance with the calls

of modern economic reality. Issues concerning the development of tools for the monitoring of labour, as well as goods markets, should lead us to identify the finest role and the best working relationship between the pubic and private sectors.

Within the framework of this unit, one important issue is that of financing. A relevant presentation will be made on the subject of channelling financial flows to vocational education and training. The various financial systems and the number of alternative financing types of initial and continuing training, as well as initial vocational education, should be considered in our work.

The title of the fourth thematic unit is *"Internationalisation of Economic Activities and Tourism"*. We have already surpassed the age of one-dimensional vacation tourism. If we inquire about an urban hotel – not a resort – on the distribution of its cycle of business, we will find that a proportion of 60-70% is attributed to professional tourism. The customers are managers and corporate employees, who travel for business. We therefore observe the emergence of a new type of clientele, of a new market. Issues pertaining to the role of vocational education and training in the new professions that stem from this new market are critical. This becomes especially important for the countries which intend to make use of their own absolute and comparative advantages in the area of services, and specifically in the sector of tourism.

Vocational education and training is therefore an important issue in the area of tourism. It is, further, an issue that concerns us not only in Greece, but, I think, for many other countries of the wider European region as well.

Last and fifth thematic unit: *"Non-Commercial Exchanges and Vocational Training"*. The title appears strange. Why 'non-commercial exchanges'? Internationalisation is a fact, globalisation is a fact, and mobility is a fact. However, mobility does not only refer to goods and capital. There is another type which is a function of the level of societal development. It is a mobility that has to do with ideas, information, culture and art. It is a quite complicated topic, but vital for our society. We should investigate how, after attaining a certain level of prosperity, issues of cultural activity could yield new professions in the labour market. Naturally, for the operation of these markets, these new professions will in turn require training.

This is our last thematic unit that we would like to touch upon, here in Crete, on this island of our ancient civilisation: the issue of non-economic/commercial exchanges that present a profound economic interest in relation to vocational education and training.

Ladies and Gentlemen, this is the rationale for our symposium. Thank you very much.

4 Vocational Education and Training and New Technologies

4.1 The New International Economic Environment
by Ms Louka Katselis

Ms Louka Katselis is Professor at and Director of the Department of Economic Science of the School of Law, Economics and Political Sciences of the University of Athens.

Ministers,
Representatives of International Organisations,
Dear Participants,

The morning session is about to finish and the last speakers always bear a great responsibility. Many things have already been said and thus I will try to be comprehensive as well as substantial.

I will try to structure my brief intervention into three sections. Initially, I would like to highlight some basic changes in the international economic environment. Secondly, I would like to analyse their impact on the labour market and on the training service sector in particular. Finally, I will share some thoughts concerning the agenda of European policy, highlighting, in the process, some questions which national governments should answer in formulating policy.

Just a few years before the dawn of the 21st century, the European system of education and training is called upon to cope with old problems and to adapt to new challenges. The steps that should be taken must necessarily take into account the great changes that have taken place internationally.

From the beginning of the 1980s, Alvin Toffler was already writing prophetically about the end of the industrial society and the emergence of a new civilization, which brings into being new family and labour models, a new economy, new political conflicts, and most importantly a new perception of things.[1]

In the 1990s, we have already entered this new era. Within the new 'information or knowledge society', information processes as well as technology in the field

1 A. Toffler, The Third Wave

of production are rapidly changing. The value of an enterprise is estimated from its capability to acquire, to produce, to disseminate, and to apply knowledge commercially within the productive process. Mass production is replaced by new production processes, which promote more flexible adaptation to consumers' demands. In the new international world order, multinational enterprises which are active in the global market place are restructuring production in all industrial fields and services. Even the most traditional sectors of the economy, such as the textile industry, construction, tourism, or medical care are being affected.

In this new information society, competition and conflict are no longer competition and conflict between states for new territories or for enlarged markets. Instead, with the possible exception of raw material and energy resources, competition centres on the establishment of competitive conditions in the production and dissemination of knowledge and on the use of information networks, telecommunication satellites, or the mass media, for ensuring access to potential consumers.

The impact of these developments and the adaptation that they require have not yet been understood fully. They affect directly not only individual choices but also the exercise of policies.

At the production level, we are experiencing a crisis in the traditional, technologically obsolete industrial units such as the steel, metallurgical, shipbuilding, and automobile industries. Yet these were the industries which supported economic growth during the previous decades. Nowadays, all enterprises, regardless of size, are called upon to adapt themselves in view of the emergence of new, dynamic, information-intensive business units. In all sectors of economic activity, especially in services, production based on modern technology is being fragmented and is supported by a series of new services and networks.

Hierarchical organizational structures give way to more collective and flexible modes of administration. Highly-skilled labour assumes special importance and receives high wages. The employer or manager who bases the profitability of his unit on the high productivity of his staff is now becoming – and this is important – personally interested in the education, training, safety, mental and corporal hygiene of his workers, as well as their positive disposition to work. Thus, in rapidly developing societies, the productive network is extended further to cover workers' support services including training, security, social protection, and family assistance. In this way, social services are provided within the market place while, for many years, these had remained unsatisfactory or covered exclusively through social policy.

In the new international economic order, the development and extension of the productive and creative capabilities of society presuppose the ability of its members to adapt easily, to obtain continuous training and further education, and to create effective networks of social support. Whenever productive restructuring is not undertaken in an organized, fast and effective manner, or is not underpinned by the simultaneous development of basic education, of training, of continuous education and of effective networks of social support, societies are being hit by unemployment and social exclusion. Societies then run the risk of becoming divided into "insiders" and "outsiders" even if productivity is enhanced and high growth rates are being achieved.

The rapid changes in production and organization have led to a rapid degradation of the acquired knowledge and to major upheavals in the labour market. It is estimated that 80% of the stock of knowledge of an individual becomes obsolete within a decade, and that a university graduate is forced to change his profession up to seven times throughout his lifetime. New professions continuously emerge while traditional ones disappear. Under these circumstances, there not only exist mounting pressures for new investment in education and training, but major changes in the character of the educational process have taken place.

Young people, overwhelmed by new information, are gaining access to new sources of knowledge through electronic networks and contemporary communication media. They have to learn how to identify useful information, and how to infer their own conclusions from it. In order to do so, they must have developed earlier their analytical and critical thinking as well as most basic skills. They must have learned to think abstractly and creatively, to formulate their thoughts clearly both in oral and written form, and they must have developed integrative skills. They must have learned how to learn effectively. If they have done so, they will be aware that knowledge is a continuous process, which does not start at a certain point in life and does not end with a degree. 'I am continuously learning as I grow old' is what the ancient Greeks used to say.

In view of these major challenges, the structure of demand for education and training services has greatly changed. At the same time, we are witnessing changes in the supply of these services. Thus the educational system is called upon to create new structures, to extend its services, and to use new educational methods in order to rise to the task.

Let us have a closer look at these changes starting from the demand side for training services. Because of the changes which are taking place in production, frictional as well as structural unemployment is rapidly

increasing. The time one spends between two jobs is prolonged, since there is no sufficient information on the labour market itself, and there is increased uncertainty about the characteristics or prospects of any open position. If the time devoted to job search is long, the skills that a prospective candidate possesses tend to become obsolete and his/her chance of finding a satisfactory job is reduced. Therefore, finding a satisfactory job presupposes, more often than not, training or retraining.

Under these circumstances, every potential employee, especially one that has been unemployed for a long time, feels the pressure to retrain and retool. He or she does not know in advance, however, which training programme may extend his/her skills more effectively, or which one may best respond to the needs of the labour market. The greater the need one has for retraining, the more inexperienced one is, the older one gets, and the more traumatic one's previous work experience has been, the more incapable he or she appears in making the right choices.

Under the fear of long-term unemployment or marginalisation, young people, in particular, approach education or training services with apprehension. They feel the pressure from their social and family environment to do something, and they have the illusion that training would resolve the problem of their integration into the labour market. They make choices based on the advice of friends or family members who give them information on the current demand for graduates from a specific programme. The sad thing is that, many times, this information is not useful, since conditions in the labour market change rapidly and new skills are being demanded. Therefore, whereas the demand for educational, training and retraining services grows fast, the capabilities for an effective use of these services are reduced or, at least, not correspondingly broadened.

In addition, in the presence of more flexible labour markets, workers do not necessarily have adequate incentives to receive training. The more flexible the labour market becomes, and the lower real wages get, the greater is the cost that workers or the unemployed have to bear to acquire training or retraining.

As with any investment decision, investment in human capital has to be amortized. Enhanced flexibility in the labour market might in fact imply reduced incentives for investment in human capital, which is a necessary condition for productivity growth.

On the supply side, there is evidence of rapid growth in educational and training services provided by both the public and private sectors. The expansion of services, however, has, in many instances, remained anarchic and ineffective.

First, there still exists considerable confusion as to the distinction that should be drawn between basic educational as opposed to training services. This has been exacerbated by the fact that formal educational systems have often been driven to provide professional training services, while vocational institutes have often offered courses in basic sciences. It is slowly becoming evident that general education and basic skills ought to be provided by formal educational systems, whereas training systems ought to concentrate on the development of additional professional skills that are needed by the market.

Secondly, the priorities of publicly-funded educational and training programmes ought to be distinguished from those of the private sector. There is a growing consensus that the chief priority for the public sector is the provision of high-quality general education. Instead, in many developing countries, the public sector still provides professional training from the secondary-school level upwards at high cost and with limited effectiveness.

Priority on the provision of high-quality, basic education is becoming even more important in the information society of the 1990s. When citizens are functionally illiterate, when they have not developed their analytical thinking, when they cannot speak at least one foreign language, and cannot retrieve information with the use of computers, then they are seriously handicapped in a rapidly changing labour market.

The third issue in relation to the development of training services is the breadth, scope and content of competencies and fields offered. These are usually developed with an eye towards past or present development needs, even though, training ought to enhance capabilities for future needs. The absence of adequate information about future needs constitutes a major market imperfection that hampers the smooth functioning of both the training and labour markets.

Last but not least, quality is a major issue in the design of training programmes and in their implementation.

As the market for providing educational and training services faces new challenges, national governments and international organisations and agencies are called upon to make significant decisions and to spend considerable amounts of money under conditions of uncertainty. Can we draw some conclusions as to the direction of European policy in this domain? I believe agreement could be reached at the level of principles, and perhaps at the level of means of policy.

At the level of principles, I would set forth three main principles or objectives:

a) Safeguarding the right of access to educational and training services: unobstructed access to the educational and training systems has to be considered an undeniable social right, especially in the context of the information society. At all levels, education and training systems have to remain open to those who want to obtain services regardless of economic ability, age, or prior job experience.

Therefore our foremost European objective is to do away with educational exclusion. This principle dictates specific policy priorities, such as creating schools for those who have not completed basic education or are drop-outs, helping school and university students with special assistance courses, doing away with arbitrary quotas on the provision of tertiary education, and introducing flexible, educational training and retraining programmes at all levels. It should also be remembered that the social right to educational access goes hand in hand with two other social rights: the social right to employment, and the social right to information. Thus, active educational policies go hand in hand with active employment policies and policies to promote the dissemination of information available to citizens.

b) The second principle to which I believe we can agree is the need to extend the availability of educational options, and to enhance the educational choices of European citizens. The fast changes in technology and the burst of information make this a pressing need. Citizens should be able to choose the place, the time and the breadth of their education and training in order to cover their diverse professional, economic and social needs.

Since, from the level of maturity, the experiences and choices differ from person to person, the fulfilment of this second principle presupposes the development of basic skills – language, analytical abilities, expression – at the level of obligatory education, the expansion of these skills at the secondary level, and the substantial consolidation of knowledge at the level of tertiary education. Additionally, it requires the availability of adequate training and retraining services throughout one's professional life. Social security and health benefits should be extended during training periods. Furthermore active consultation and orientation services should be developed so that citizens can make rational and cost-effective choices regarding their educational and professional future.

c) The third principle concerns the relationship between education and training on the one hand, and the workings of the labour market on the other. Educational and training systems should be open fora for the provision of skills and knowledge. They cannot and should not function as mechanisms which put up barriers to entry in the labour market, nor do they guarantee "professional rights" to their graduates. It is through the acquisition of high-quality skills and abilities that graduates enhance their chances to be integrated in the labour market and to perform successfully in it.

If we can agree on these three principles, we can go one step further and discuss policy options. The first issue that arises concerns the definition of an "optimal regulatory area" for educational and training policy. In the global market place, should education or training be designed at the supranational, the national or the very local level? The "subsidiarity principle", according to which policies should be designed at the most functionally appropriate level, is not very helpful. Even though there appears to be a trend toward the localisation of educational and training services, my feeling is that the exigencies of a global market place will push us all towards greater homogeneity and more global networking in the provision of these services.

The second issue touches upon the role of the public sector. It is generally accepted that public intervention in the market place is justified on grounds of mitigating existing inequalities or of amplifying market inefficiencies. In this case, the public sector has an important role to play in safeguarding access to the educational and training systems, in the development of necessary skills for future market needs, or in complementing the private market in areas where fixed costs prohibit the development of profitable services by the private sector. Such a role for the public sector, however, presupposes social funding through the tax system. Consequently, the necessary steps must be taken to finance adequately public training services either from national budgets or from the European Union's structural funds.

The third issue concerns the introduction of total quality management in the provision of educational and training services. The design and implementation of effective quality control systems in this field are still at an elementary stage. In this direction, specialized information systems need to be elaborated and integrated, and quality indicators developed. These can provide a basis for an objective evaluation of these services by both users and policy-makers.

Finally, special attention should be given to the development of contemporary services for counselling and professional orientation regarding training and educational choices. As we have already mentioned, most young people do not possess adequate information based on which to make educational or professional choices. At the same time, training centres need to become more closely connected with the business world through appropriate networking and/or apprenticeships, so that new skill requirements can be easily detected and obsolete ones eliminated. Networking

between educational and training centres and business can also facilitate the placement of graduates and reduce considerably the costs of job hunting.

The challenge for European policy, therefore, is, on the one hand, to develop a modern educational and training system and, at the same time, to develop the adaptational capabilities required to service changing market needs.

It is only through flexible education and training in combination with active employment policies that unemployment in Europe can be reduced. As long as Europe insists that the fulfilment of the Maastricht criteria is more important than growth and employment, then any training policy will turn out to be ineffective. We can easily substitute the 'unemployed European' by the 'European trainee', but this does not provide a solution to Europe's problem. Instead, the challenge before us is to provide all Europeans with those skills and capabilities that empower them to meet the challenges of changing labour markets in the emerging information society of the 21st century.

4.2 New Technologies and the Production Process: the Impact on Training
by Mr Jean-Pierre Jallade

Mr Jean-Pierre Jallade is Associate Professor at the University of Paris IX (Dauphine), France. The introduction was prepared jointly with Mr Olivier Bertrand

1 Introduction

One should avoid the snag of technological "determinism" that would link in a simplistic way the introduction of new technologies, new qualifications and innovations in Vocational Training. One should refrain from saying that new technologies determine in a direct univocal way new qualifications which in turn generate new needs for training. The role of new forms of work organization is a determining factor in the emergence of new qualification.

2 Three fundamental developments

The major trends recorded in the past 20 years could be summarized as follows:

2.1 Intensification of competition and globalization

This can be translated into:

- an increased variability of goods and services so as to adapt them to demand, constant innovations,
- the growing importance of quality in the selection criteria of clients,
- the need for an efficient management so as to master costs and delivery deadlines: more flexible personnel management (part-time), outsourcing of some services for cost-related reasons.

2.2 New technologies:

- decentralized information technology in services is to be found everywhere,
- in large enterprises, wide networks operate in real time thanks to telecommunications,
- the automation of simple and repetitive tasks with suppression of unskilled jobs is under way,
- the spreading of programmable automation in industry allows for the flexibility necessary to adapt production to demand,
- but new technologies have also their limitations: a machine cannot replace creativity, judgement, human relations. Some tasks which could be computerized on the technical level are not for financial reasons.

2.3 The new forms of work organization

The main features are as follows:

- promoting flexible adaptable work structures and organization,
- decentralizing and delegating powers of decision,
- desegregating functions: production, marketing, research, maintenance,
- decreasing the number of hierarchy levels,
- development of team work: one no longer defines a job, but rather the production objectives of a team. Increased dialogue, mobilization of executors' intelligence, pursuit of ideas and suggestions from the base.

3 Contents of jobs

With the exception of computer technology, there are few entirely new professions or jobs, but the transformation of existing work situations is generalized. Major trends can be summarized as follows:

- Disappearance of low-skilled jobs: great difficulties in sectors with a high percentage of low-skilled jobs.
- Increased multi-functionality of executive personnel: in industry, executive personnel must intervene on the first level of maintenance, less specialization for each type of machinery. The separation between mechanics, electricity, electronics is unsuitable. In the 70s'-80s, there was a great controversy in order to know whether new technologies were going to "de-qualify" jobs or – on the contrary – they were going to lead to an "enrichment" of tasks. In the field of services, secretarial work organized in a "pool" represented an extreme form of rationalization and dequalification. In modern enterprises and administrations, secretaries execute text processing for printing and have varied assistance tasks.
- Difficulties for the intermediary level of the hierarchy: the middle level management faces a crisis unless technically qualified;

- at the intermediary level, many jobs require rational competencies, particularly so in services: being able to listen to the client or user, carry out a diagnostic;
- at a higher level, many jobs require a higher specialization in view of the increased technical nature in certain fields: in finance for instance (actuaries), in commerce (logistics) and, of course, computer scientists;
- the "communication" and "human resources" functions, oriented towards animation, training and coordination are indispensable in a decentralized organization.

4 New competencies

The needs in terms of knowledge, know-how and behaviour raised by the labour market are in rapid development. New trends are as follows:

- traditional technical know-how loses importance;
- we witness an upwards shift of the general level of knowledge which must be more systematic and more in-depth, as equipment and organizations are more complex and clients more demanding;
- in industry, automation demands a desegregation of technical specialities as it touches upon many disciplines: "multidisciplinarity" becomes an asset;
- there is a "double-competency bonus" in many sectors: technical-commercial, legal-linguistic, biologist-computer scientist, etc;
- behaviour acquires a fundamental importance: people's potential, personalities, adaptability, initiative, creativity. In the service sector (50% of jobs) priority is placed on basic knowledge and behaviour: relations with the client.

Adaptation to technological changes requires solid basic knowledge, both general and technological.

5 Implications for technical and vocational education and training

5.1 Initial training

- Access: everybody must leave the training system with a minimum diploma as unskilled jobs are disappearing; if this were not the case, then we would be creating "excluded people".
- Strengthen the progression itinerary: raising the level of competencies must be translated into opportunities for progress (in the scale of diplomas) within the system of technical and vocational education and training: vocational training should no longer be a "dead-end". Access routes towards higher education cycles and reintegration in general education should be multiplied.
- Training programmes should be despecialized by grouping channels, specialities and diplomas, and by stressing competencies "transferable" from one sector to the other. In all European countries, one sees a decrease in the number of training courses and diplomas by the grouping of specialities and diplomas. Modernization of contents must be a constant concern. Its implementation requires efficient institutional mechanisms of dialogue between social partners and public trainers.
- It is necessary to promote training in alternation and apprenticeship so as to allow for the acquisition of real-life behaviour. In-house training offers the opportunity to become familiar not only with new equipment, but also with corporate culture.
- Start an on-going process for the renewal of diplomas and programmes through bipartite or tripartite committees (employers/unions/government).

5.2 Continuing training

Continuing vocational training acquires a central role. It must "listen to" the needs of enterprises and become a component of personnel policies. Enterprises will be brought to invest in personnel training more than in the past. It is important that the development of "human resources" within enterprises becomes a factor of competitiveness and that continuing training policies are integrated in personnel policies.

4.3 New Technologies and the Production Process: Changing Patterns of Production and the Need for Effective Vocational Education and Training

by Mr Stavros Stavrou

Mr Stavros Stavrou is Deputy Director of the European Centre for the Development of Vocational Training (CEDEFOP)

In the last few years we have seen an intensification of the globalization of the economy. Certain of its chief characteristics are, among others, the following:

- the rapid increase in the transparency of the demand and the supply of products and services beyond national borders,
- the globalization in terms of the convergence of major functional-quality models and other expectations on the part of the consumers,
- emphasis on improved quality and reduced delivery times as well as strict observance of deadlines,
- more intense differentiation, even individualization, of customers' wishes, and
- the geographic-/functional distribution of production to more than one country aiming at its total improvement.

All this, in tandem with macro-economic circumstances that require an increase of the productive force beyond demand and the reduction of the product life-cycle, has intensified international competition. Businesses have added to and exploited these new tech-

nologies so as to face this challenge and become competent:

- in the development and timely introduction of new technologies in both production and the products, "innovation and time to markets",
- to response to dynamic business changes in the environment, especially under conditions of uncertainty (flexibility, "customer oriented behaviour"),
- the globalization of business strategies.

Informatics, especially, and electronic mass media have created fully new circumstances (or at least the preconditions) for direct and effective communication and collaboration between three main areas:

- research, development and design planning,
- production, and
- management and administration through networking.

These attempts to reorganize the productive process means that we have partly gone beyond the Taylor and Ford models in some sectors at least. Initially, the efforts were focused on the technical restructuring of the production chain itself. The reduction of "production depth" with the relocation of some tasks outside the company, "the just in time production" and the provision of modern technological equipment (CAD, CAM, CIM etc.) have led to some examples of "factories without workers", as well as to lean production which, in the change from the '80s to the '90s was felt to be the panacea that would resolve all the relevant problems. Very soon it became apparent that technological renewal and production restructuring would not suffice on their own to reinforce the competitiveness of a company by ensuring the much-desired flexibility and accuracy of the necessary reactions to the rapidly changing demands of the market. These efforts should be enforced with the introduction of new models of employment and personnel management that would have to have suitable skills for each case. One such wider systemic reforming of production called 'business process re-engineering' by the Anglo-Saxons, brings about the following: establishment of the semi-autonomous work teams, revision and enrichment of the content of the work, and an increase in initiative and the limits of responsibility and decision by workers aiming at the reduction of the hierarchic ranks and the reinforcement of an interactive vertical cooperation.

Such a strategy would require a constant enrichment of professional skills and an amelioration of their level. But even though technical changes can be identified with a relatively high degree of certainty, the manner in which they affect the organization of work and the corresponding professional competence has not been sufficiently investigated, especially since the correlations are not one to one. There is a general trend to facilitate workers in their continuous training by widening their horizons to similar and neighbouring activities. The existence and the flexible exploitation of different means or opportunities for vocational education, training, additional training and career furthering through various combinations and choices remains always one of the critical desiderata.

It is internationally recognized that in the field of total reformation of production, part of the triptych of technical aspects, organization and vocational competence, there are still many opportunities that remain unexploited. A recent large survey in Germany showed that companies, after introducing new labour organization methods, achieved productivity increases of the following percentages: 9.5% by extending work operations, 8.5% by teamwork, 17.5% by decentralization of a considerable part of decision-making, 7% by the reorientation of production towards the product itself (instead of the phases of production), 11% on the basis of quality cycles, and over 30% by an introduction of a combination of these innovations in comparison to companies which continued following the old Taylor model.

At the same time, the European approach to this topic, which is marked by a greater individual responsibility, less hierarchy and greater worker participation, seems to show considerable differences compared to respective efforts in the US and Japan.

Therefore, on this basis, it emerges that nowadays training, education and further training for human resources that would ensure the constant improvement of their quality would serve as an active factor for structural changes with an improvement in business competitiveness, and in European competitiveness in general, in the economic world market. What gains critical importance is the systemic combination of initial with continuous education and training so as to open up the following prospects:

- Response to new models of employment and professions
  - through specialization in the narrow professional field,
  - with the acquisition of abilities for further activities, and
  - by career furthering.
- Combination of these additional elements in professional profiles so that they can correspond to various professional activities, economic sectors or professional guilds in a flexible manner.
- Elementary transparency for businesses so that the real practical value of the additional abilities that workers who work in them have can be recognized.
- Credible information provided to youth as to the existing alternatives of career prospects and professional advancement.
- Orientation and support of adults in view of change in the field of their work or their employment.
- Creation of models by agencies of education and training about market demand and the quality of their services.

Workers who will correspond to such more demanding jobs will have to have the following skills:

- Manual skills
- Mental abilities
- Analytical and synthetic thinking
- Computing and foreign languages
- Guidance skills
- Initiative
- Emergency decisionmaking
- Supervisory activities
- Communicative skills and conflict management
- Good teamwork.

All these require a wider and high level initial general education so that inducted youths may acquire, among other things, the ability of "learning by themselves". This wide infrastructure of knowledge will facilitate adaptation to changing work market demands by the addition of the most suitable new knowledge.

In respect of the levels and the content of the professions, we see a specific trend is starting to show, whereby the goods of these innovations throughout the spectrum of production chiefly benefit people with higher level qualifications; the upgraded jobs in terms of quality set increased demands of the workers. That is where unique opportunities are to be found for the creation of new jobs. This brings about the obsolescence of medium-level skills, especially if acquired through educational training programmes. That happens because trainees just learn how to carry out a specific task (in a model fashion). However they have not been trained to organize their work themselves or to adapt to major changes in their working environment. So that would imply that there is a need for the enrichment of vocational education and training by general education elements which are considerably different from the traditional meaning of the term.

The role of the workplace as a learning environment, and especially of additional training of a new kind that goes beyond traditional "learning by doing", since it would incorporate and assimilate systematically technological innovations in production as a learning inflow, will be very important, even determining. It concerns specific jobs, usually of a short duration, but continuous as a process as well. Being a decentralized form of learning, it uses multimedia to the widest possible extent and, with the continuous revision of the subject to be learned, it also assesses the furthest possible practical convertibility of the acquired competencies and skills. However, innovations are not of their own a motive or a tool for learning throughout work. The predominant means of informatics in this case should be formed in such a way that, apart from the accomplishment of the task itself, they should also have "didactic", if not individualized, competencies. It is only then that the worker will be encouraged and become capable not only of understanding and of applying passively, but of forming actively the new possibilities afforded each time.

There are many indications whereby technical expertise and technology, because of the globalization both of knowledge and of the markets, will converge and will almost be equated on a common point with relatively few differences. This will result in competition being transposed to workers' levels, and especially to their capabilities, the quality and combination of which, through suitable forms of work organization, will be decisive for the fate of a company within the business arena.

Under this spectrum, the role of vocational education and training seems to acquire ever-greater importance. The challenges are major and various and the problems are complex and urgent. But the prospects and solutions at hand appear very alluring and original.

4.4 New Technologies – Vocational Education and Training: Utilization of New Technologies in Vocational Education and Training *by Ms Mara Brugia*

Ms Mara Brugia is an Expert in Vocational Education and Training at the European Centre for the Development of Vocational Training (CEDEFOP)

I have been asked by the conference organizers to report on an item which is of the utmost importance in our society, i.e. the use of new technologies and their impact on Vocational Education and Training.

I will try to give a brief overview of the main results and conclusions drawn from the different studies carried out and coordinated by CEDEFOP over the last 2-3 years in the field of IT. I would like to say a few words on the research approach and on the methodology used in these studies. Among the initiatives supported by CEDEFOP in this field, particular importance has been attached to the impact of change on skills and occupational profiles caused by the information society.

As far as the research approach is concerned, CEDEFOP's studies mainly tend to identify the impact of information and communication technologies (ICT) on competencies and qualifications; i.e. identify in different occupations and professions how competencies are affected by ICT, what are the new competencies required by the workers in the information society, how this modifies the recruitment policies of the enterprises; that is, at which qualification level enterprises recruit their staff, how professions and occupations evolve, and what is the response of the

VET systems; that is, how the VET systems react to the changes caused by ICT.

The results of the studies are mainly addressed to policy makers, in the form of recommendations, which they can take into account when formulating their VET policies.

After this brief introduction let us go into more depth. Over the past 20 years we have witnessed important technological changes mainly caused by the rapid development and extensive use of information and communicatien technologies. This trend is modifying work, the structure of qualifications and work organizations within enterprises, and provoking substantial changes in the labour market and in society as a whole.

1 Technological development and consequent organizational changes

Enterprises have to deal with an increase in competition due to the increasing internationalization and deregulation of the markets. Enterprises have therefore to fight hard and to be very creative to preserve or improve the competitive edge that they need in order to keep existing customers and attract new ones.

ICTs have their biggest impact in the workplace. New functions are emerging. Work organization is changing: enterprises are increasingly abandoning the traditional models and they are simplifying their hierarchical structure, delegating responsibilities at all levels and ensuring the participation of all their employees in the innovation process. The introduction of IT in enterprises and organizations tends to run parallel with organizational changes fundamentally involving the transition from highly hierarchical structures to project groups (groupware). The use of networks is also becoming more and more important (intranet, internet).

The direct consequence of these organizational changes is the fact that workers are asked to develop new competencies.

2 Changes in competencies

The introduction of IT in the various functional areas tends to make mechanical, lesser-skilled tasks superfluous.

The new competencies required in the wake of the introduction of IT are fundamentally related to the ability to obtain, select, process and disseminate information. Also, new methodological competencies related to the knowledge of the organization in question and how to move within this organization are necessary. In sectors in which IT exerts a strong influence, social and organizational competencies are priorities.

The integral development of the human personality, the fundamental objective of all education and training, is therefore the very basis of the new competencies. This means that abilities such as self-esteem, creativity, adaptability, responsibility, self-control or the ability to work in a team or communication capability, open-mindedness, tolerance, adaptability to changes, self-identification (of all employees) with the enterprise objectives, and problem-solving capability are becoming the essential personality attributes of the competent professional.

In a technological environment characterized by constant innovation, permanent ability to learn has become a fundamental competence for the majority of professionals.

Knowledge and information, the essential raw material for production in the information society, are to be found in the context of the overall organization, rather then at the level of individual professionals. This increases the responsibility of the enterprise as a learning organization.

This causes changes in the content of various professions: individuals need more knowledge and an increasing number of skills and competencies to accomplish tasks which are becoming more and more complex.

Although technical competencies remain very important in the Information Society, the main focus is on personal, relational and organizational competencies.

3 Changes in qualifications required/recruitment policies of the enterprises

Serious integration problems are emerging for certain groups, with the gradual exclusion from employment in the area of ICT of those with a certification level below the upper-secondary school-leaving certificate or middle-level vocational training.

A study carried out in France, Portugal and Scotland on changes in competencies for technicians at levels 3-4 has shown that there is a general tendency to no longer recruit workers qualified to level 3 (referred to the CEDEFOP classification of 5 training levels) and to replace those qualified to level 4 with those qualified to level 5 (particularly in Portugal and France).

For the posts of technicians at levels 3-4, which could be covered and occupied by people having a Bac+2 certificate, engineers are recruited in most of the cases.

It is clear in the three countries (France, Portugal and Scotland) that the posts of technicians are increasingly offered to and occupied by people having a higher education certification level. There are, of course,

differences between the three countries. In Portugal and Scotland, it seems that workers with a short-cycle higher technical education certificate (Institutos politecnicos in Portugal, and HNC – Higher National Certificate – or HND – Higher National Diploma – in Scotland) and with a long-cycle higher technical education certificate (mestrados au Portugal, first degree and post-graduate in Scotland) are not enough to meet the needs of enterprises, and enterprises prefer to recruit engineers.

Recruitment for all jobs requiring these skills takes place at a higher level of qualification than in the past. Also a study carried out in the banking sector ("The impact of new technologies on occupational profiles in the banking sector – case studies in France, Luxembourg, The Netherlands and the United Kingdom") showed that overqualified candidates tend to offer their services for jobs requiring sound knowledge of banking, but not requiring their degrees and diplomas, as they consider that they might move on to a better post when they have joined the bank. Looking here at the notion of banking careers, those interviewed all agreed that banking careers in which people start at the bottom and rise, after a number of years of experience, to management levels are no longer the norm.

Career advancement is much more uneven than in the past: while people may well spend their entire lives in the same bank, radical changes in the organization and structure of work mean that they have to be prepared to perform new types of work without necessarily moving up in the ranks.

In the future, internal promotion is therefore likely to be much more random than in the past; advancement based on length of service is now obsolete, for two reasons:

- what matters nowadays, in all the cases examined, is the ability to react and adapt to a precise situation and to work efficiently;
- banks are tending to recruit – with one exception in the United Kingdom – at a higher level of qualification.

4 Answer of the VET systems to the identified changes in terms of training supply; which training initiatives are developed in response to new professional needs

Initial training provision, both at university and vocational training level, is going through a significant period of renewal in terms of technological content. In the case of universities, short-cycle diplomas with very distinct vocational learning are gaining in importance.

There has been a significant increase in the number of initial certificates and training places over the last decade, including a surplus of certificate-holders in some areas.

The problem still remains the development of organizational and social competencies, to which curricula attach very little importance.

The interviews carried out in France, Portugal and Scotland on technicians showed that training initiatives focused on communication capability are not so developed. In the three countries investigated, the educational and training system does not seem to take into account relational and social competencies.

Continuing training

The introduction of the new technologies and subsequent changes in jobs have to be underpinned by a sound policy of training in enterprise. The methods used in each country and in each of the enterprises interviewed to fill skill gaps or improve skills are nevertheless closely linked to their respective strategy choices.

As a general rule training schemes are:

- integrated into the occupation in question and offered to everyone working in that occupation;
- organized to upgrade skills (France, United Kingdom, Netherlands);
- organized during the introduction of devices using the new technologies that offer, for instance, savings in time and increased operational reliability (Luxembourg, France);
- organized to make people aware of and train them in the use of tools enabling ready access to information that could improve the quality of the service given.

At present, there does not seem to be a standard route for training in the new technologies (Luxembourg, France). One-off schemes tend to be organized depending on needs.

In more general terms, as the conclusions of the study on banking have shown, the management of the banks interviewed (Netherlands, France, United Kingdom) would like to attach more importance to continuing training and in particular to encourage employees to continue to progress by taking part in training schemes or self-training (Netherlands, United Kingdom), especially by attending training leading to certificates or diplomas. Some countries have, moreover, started to reform initial training in this sector by rebuilding training routes and enabling diplomas to be obtained by credit units.

This desire to raise employees' awareness and to encourage them to continue to learn helps employees' achieve the state of mind that they will need to successfully keep up with the changes that will take

place in the banking industry throughout the world over the next ten years.

In general terms, continuing training provision is not adequately planned by the enterprises in accordance with the new requirements in occupational areas in which IT exerts a strong influence; in the majority of cases, continuing training is left to the initiative of the employee in the form of self-directed learning.

It is important to point out, though, that many enterprises, overall of medium and large size, organize training initiatives within the enterprise itself, privileging different "training areas" which may help the workers to acquire the competencies and abilities which are required by the information society.

A study carried out in Italy, France and Spain on "The impact of information and communication technologies on vocational competencies and training in the telecommunication sector and administration/ offices" showed that enterprises are offering and organizing training and courses for their employees which aim at developing social and relational competencies, or courses based on a detailed knowledge of the enterprise and its organization, so as to stimulate an entrepreneurial culture.

Very interesting also are the training methodologies used for providing training. In Italy, France and Spain, some experiences of "action learning" have been identified. "Action learning initiatives" are based on working groups composed of the workers in the enterprise where the learning process is activated starting from a specific and real working situation. Workers are faced with a real situation which exists in their working environment in the enterprise in which they work and they are asked to analyze the situation, identify the different problematic it presents and to propose possible solutions to be applied. The best solution found will be used for solving the problem. It is a sort of learning by doing. What workers learn is immediately applied in the working environment.

As far as continuing training is concerned, there are some interesting initiatives which are being organized by enterprises to upgrade the competencies of their workers.

Recommendations for the improvement of training.

First of all, it is of the utmost importance that policy makers take into account the acquisition of the key competencies required by IS in their training objectives. Then, when providing training, it is important to make use of the technologies which will have to be used by the workers in their working environment so that they can get used to ICT. Finally, it is important to articulate the training supply in a perspective of continuing training which has to be compatible with the employed or unemployed status of the beneficiaries.

The new role of training is focused on its capacity to identify new professional needs expressed in the production context and to translate them into new educational and training contents through a continuous exchange between the production system and the training system where each system can learn from the other.

This should lead to a change in the culture of learning at all ages. It would no longer be about absorbing information and not even just about reading, writing and arithmetic. Rather the key should be to foster abilities to communicate, to select, to stimulate and model. New skills in abstraction, systems-thinking and teamworking are needed, i.e. almost the opposite of most current schooling models. And new policy frameworks are also needed.

Conclusions

- the urgent need for active social policies, for improving access to education and training for people of any age, and for building ICT awareness into labour market measures;
- the urgent need to renew Europe's training and education systems;
- the need for rethinking the role of the different actors involved in education and training processes and, more in detail, a greater involvement of trade unions in training and development.

5 Environmental Education and Training

5.1 Introduction *by Mr Jean Clercy*

Mr Jean Clercy is General Secretary of the AFDET

Eminent specialists will shortly address questions related to environmental policies and their impact on education and professional training. Since I am not specialized in ecology, let me approach environmental problems from a different aspect; that is, the young person who is undertaking training in his environment.

In what sense are we to understand the term "environmental"? The Dictionary of the French Language "Le Robert" states that this adjective can be related to four definitions of the term "environment".

For the purpose of this presentation, I will be using the fourth meaning of the word. It entered the French language in 1964 from the American word "environment" and is defined as a set of cultural conditions – in its sociological meaning – capable of impacting on human activities. It can also represent natural conditions.

The two discussion topics that will follow this introduction:

- Environmental policies and productive activity and
- Environmental questions for Education and Vocational Training

will address environmental aspects of locations and ecology.

The goal of my intervention is to place the question on environment in a historical and sociological context in order to bring forth questions in hope of finding solutions – or at least proposals – that can help us face the challenge brought forth by the 21st century and which we are beginning to perceive.

First and foremost, to this day, what statements can we make with regard to the present situation?

We realize that increased exchanges and productive activity are becoming global. Means of communications are faster and faster resulting in a gap between the transmission of ideas and that of products and therefore creating room for a virtual product.

Consequently, contacts, sharing of ideas, and reactions from the environment are very much ahead of the products and can therefore guide, direct, and modify such products. However, they can also have serious impacts on individual and collective behaviour.

In areas of education and vocational training, the horizontal opening-up, that is the enlargement of concerned human circles – or those who consider themselves to be such – is considerable: family, professional, political, media and international environments.

Does the vertical opening up, that is, hierarchical, follow the same movement? Yes, to a certain extent. However it is slowed down by the inertia brought about by hierarchical rapport as well as by the possible manifestation of interests carried by individuals or groups.

From a historical view point, what do we see? Without going as far back as Antiquity – and we would be authorized to do so in this place where history brings us back several millennia – let us look at European history since the Middle Ages.

The transmission of professional knowledge and know-how was passed on esoterically, directly form the transmitter to the receiver in the utmost secrecy. To this day, we can still find relics of this method in craft guilds and apprenticeships even though later influences have altered its original spirit.

In the 18th century, also called the Age of Enlightenment, attempts appeared – certainly very modest – to pass on knowledge and know-how through the setting up of "workshop schools".

During the last quarter of the 19th century and the beginning of the 20th, a breakthrough occurred. However, at the same time, divergent approaches appeared in the industrial European countries. Some chose to favour a direct contact between trainers and trainees on production sites. Others believed that offering youth professional group training was economically more productive and of better quality and that enterprises would be relieved of a burden, at best, mildly productive. Still others thought that professional qualification was not the responsibility of the training sector. Each and everyone will recognize themselves in this situation if each of these three options is not applied in a clear-cut manner.

The rapid expansion after the Second World War did not modify the various positions.

Proponents of each system believed they held the truth and that theirs was better than the others. What a pity! Through inertia, it is not excluded that these positions are still held as true to this day.

In spite of the conservative attitude of some trainers and some people responsible for training, the last quarter of the 20th century has seen a more important evolution than the last ten centuries.

A major fact in this evolution has been the modernization of professional training by the introduction of continuing education that we now call "lifelong education and training". In France, it is more commonly called the "Delors Act" as he initiated this concept in 1971.

This breakthrough opens the closed settings in which training takes place by integrating adult trainees – we do not call them students any longer – and by introducing outside trainers – we do not refer to them any longer as teachers – on production and training sites. The present relationship referred to as "School-Enterprise" stems from this new situation.

The relationship between the teaching trainer and the tutor (trainer on the production site) completely changes the situation. The adult trainee doesn't hesitate to question the trainer if he believes it to be

necessary. Training programmes are discussed and established jointly. Evaluation of newly acquired knowledge becomes paramount. In short, individualized teaching within a group is done through a pedagogical method known as generalized, one that is flexible, adaptable to each case where the beginning and ending of the knowledge process as well as the contents are debated openly.

This breakthrough, this opening in terms of strategy, would appear to be the beginning of a new type of participation, with intervention of new partners in this world without boundaries which until now has been restricted. It is quite normal for actors (personnel, students, parents) to participate in the management and reflective processes of the training institutions through their respective organizations. At the end of the 20th century, education partners are entitled to their say in this matter. Environment partners must also be taken into account: professional leaders (employers and employees) as well as local and regional elected officials. Such is the system that exists in France. This mechanism is presently in evolution and the information environment is getting involved. Resource centres for ideas, products and services are multiplying and they are offering more diversity. They are performing better and better. People and technological processes can be contacted worldwide and almost instantly.

It is a challenge of the 21st century!

What are the consequences for us?

Firstly, we must reflect and analyze the policies and the productive activity within the new environment that is developing before our eyes. The analysis stems currently from European sources. However, it is not difficult to imagine that it will soon become global. Seoul is a good example of this. It is not in the scope of this presentation to undertake such a study, but we can easily imagine that this very rapid evolution will seriously affect the structures as well as the way we think, control and make decisions in the future.

Active production having entered the realm of instantaneous information, the need for transparency – in spite of trade secrets – will require a rapid adaptation of the political, economical and production structures to the newly created conditions.

All of these new effects which are in full evolution will have repercussions on education and vocational training.

In this precise sector, the foreseeable effects could bring about a profound evolution – for some, a revolution – in the structures, the methods and the behaviour. Particularly, the relationship between the trainer and trainee is at the centre of a circle where several variables such as family, professional, political, media, national and international support systems can interfere. The development of resource centres such as the World Wide Web requires from the trainer-trainee team the ability to choose and isolate the element, or a set of elements, to find the answers to their research. The large volume of information should not be permitted to affect in a negative fashion the use of the wonderful environmental tools that new technologies are now providing to all.

This is also one of the challenges that awaits us today.

An important aspect today – more so in the future – is the need for young people to broaden their connections with the international environment in order to increase their competence by way of supplemental training which they can obtain abroad.

To what extent are young people moving within the European countries?

It is difficult to present an exhaustive assessment within the time that we have been allotted. However, Europe is evolving and profitable exchanges are being established between nations to allow students – including those in professional training – to travel, move around and learn elsewhere. Programmes such as Socrates and Leonardo da Vinci have proved to be helpful and are appreciated by those concerned. 400,000 young people attending the Leonardo programme were affected by such projects offered within their professional training.

In France, the Ministry of National Education offers 1,240 training grants each year. They are administered by l'AFDET and are offered to students enrolled in post-secondary technical programmes ('techniciens superieurs') for their compulsory – or elective – training course in another country within the European Union. These are but a few examples.

Evidently, other nations are doing the same. Allow me to share with you an interesting fact: of the 1,240 grant recipients from the post-secondary technical programmes, more than 10% have found a job where they took their training course. Others, fewer in number, received offers to represent the hosting firm in their area of origin once they had finished their studies.

It would seem that all of these means, still largely insufficient, are on a rising trend for the coming period of 2000-2004 and the European Union is becoming more aware of this situation. Mrs Edith Cresson, Member of the Commission responsible for research, innovation, education, training and youth said: "At a time when heads of states and governments, gathered in Cardiff, underline the need to bring Europe closer to its citizens, it is encouraging to note that community

programmes in the field of education, training and youth are amongst the most popular programmes of the Union. A survey shows that 95% of young people believe that these actions contribute to the building of Europe. The mobility programmes have allowed more than a million Europeans to spend a study or training period in another member country of the Union." Mrs. Cresson added: "The 21st century Europe will be one of knowledge. Our future competitiveness will be linked directly to our capacity to develop new knowledge, to transmit and transform it; in short, to increase its worth through the massive use of information and communication technologies."

Evidently, this concerns the mobility of students in training and it is an aspect of the question in which l'AFDET is interested.

How are students in training reacting to the employment situation?

The Minister responsible for National Education, Research and Technology tried a new experience in France. He questioned all secondary-school students to find out how they perceived their education programmes and how they could be improved. This wide survey was carried out by Alain Meirieu, a well-known specialist in the field of education.

What was their response? Firstly, they answered the questions according to what they would have wanted to be asked and not according to the objectives of the survey, that is:

- More time for optional courses.
- To prepare their integrated professional training within the "lycée".
- To prepare for their future insertion in the work force.

These answers are even more interesting in view of the fact that the surveyed students will, for the most part, pursue post-secondary studies and therefore are not contemplating an integration in the workforce in the near future.

Other surveys, carried out recently by journalists of "Le Monde" seem to point towards a division amongst teachers. Older teachers are not very preoccupied by professional insertion, whereas younger ones (less than 35 years old) view this as a priority, as do their students. Is this a generation gap? A possible answer to this question might reside in the anxiety manifested in the last fifteen years by new generations living in market economy countries when they are faced with their first job.

What are the main obstacles for the integration of young people who wish to exercise their trades in other countries?

Lack of a common language is the most important problem and therefore the solutions are to be found in the development of foreign languages within each country.

In Europe, some countries are more advanced than others. A European action in this matter would be welcome.

A second obstacle, which relies exclusively on the will of those in charge in each nation, concerns the recognition of diplomas. The lengths and contents of training programmes is what is at stake in this question and the problem in serious.

A joint declaration concerning the harmonization of the architecture of the European system for post-secondary education, made by the four ministers responsible for it in Germany, France, Italy and the United Kingdom who met last May at the Sorbonne in Paris, states that an harmonization of the study cycles, therefore the diplomas, is necessary. They are committed to giving this matter further consideration and to obtaining the participation of ministers from other countries. Let us hope that there will be a follow-up to this declaration and that it will include professional diplomas from all training levels. Some professional diplomas are already acknowledged between Germany and France; however, much has yet to be done.

These few examples of the broadening circles of influence that go beyond national boundaries show that there is a momentum and that it is time to analyse, improve and further develop this movement.

I believe that the next two subjects will help us to better define and deepen our understanding of the questions that we are raising in the environmental area of space, behaviour and ecology. The presentations should also help us determine how to include this information in the training programmes of our students and how production activities and the final product are affected.

5.2 Environmental policies and production activity *by Mr Nikos Raptis*

Mr Nikos Raptis works at the Department of Environment, University of the Aegean, Greece

In this presentation I will speak first of the relationship between the market and education and then about issues that concern the development of environmental studies. The third part of the presentation will concern certain conclusions about what we can infer from these relationships.

Vocational training and environmental issues concern two fields that are subject to great change today. Vocational training is retraining to meet the needs of

the changing workplace. On the other hand, environmental training is following two distinct pathways: one of environmental studies, the other of environmental sciences. I will later explain what I mean by that.

1. Vocational training today is called upon to respond to the new label setting of present times, which means greater flexibility and mobility for workers. Developed countries are turning from the secondary to the tertiary sector. More than two out of three workers are occupied in services, in a society where the post-war welfare state is being replaced by other forms of social protection. Changes in the welfare state cannot help but affect one of its basic pillars: namely, mandatory free education.

In respect to education, education institutions, and education and training, many changes are occurring:

- Education provision is becoming less that of the traditional school system and more and more the responsibility of informal or non-formal education. This is not a linear, painless evolution, but one full of conflicts. One could assume that, in the way that the school system has replaced previous traditional forms of education, so new form of education and training is replacing the school system today. The new education and training system is based on technology, on the individual interests of its clients, on the increased role played by the demands of employers, on institutional decentralization, and on the increase of those who educate without being educators.
- Education continues to be generalized, not only at the secondary and tertiary level, but also in space and time: i.e. lifelong learning and distance learning. But with the compression of the social benefits of the welfare state, the economic pressure falls on the traditional system. Education and training systems look elsewhere for their finance, so they create a client relationship with apprentices. Apprentices have to pay for what they learn. Free education is considered to be a measure of social protection rather than a universal right. Educational and training systems create a relationship of dependency and subservience, with what is being taught adapting to market demands.
- The third kind of development is a change of education and training systems from a military or production-line model to a service model. The school system passed on one package of information and knowledge that was thought to suffice for life. Those who failed had to turn to manual labour. Training was a kind of second chance, a kind of easy schooling system, strictly focused on learning useful techniques and methodologies. But today, in circumstances where knowledge is increasing at a fast pace, a new model emerges that has to teach one "to learn how to learn". The idea is that citizens will have to move in a market of free knowledge, so they will have to identify knowledge, to acquire it, and to exploit it in the best possible way.

The paradox is that, at the same time that the school system or the vocational education and training system seems to be ready to adapt to the market, the market is no longer in a position to anticipate long-term needs: technologies in the markets are being renewed fast. Professions emerge and vanish in a short time and the majority of workers have to change their profession many times.

These changes in respect of education bring about an important result. Training can not be seen as a parallel to the school system, as a second chance for those who will become low-level employees or manual workers. For vocational training to succeed, general education has to succeed. Training does not concern those who are excluded from schools, but everyone. Training, therefore, comes to build on the foundations laid by the successful, initial education. The demands of the market restore the connection between training and the educational system.

2. In respect to the environment, we see that it concerns adult training in two ways. One is "environmental studies", which is interdisciplinary and has extensive involvement in many fields. At the same time, within its scope, is the emergence of an "environmental science". Environmental studies are connected with the training of professional environmentalists.

The second trend is "environmental sciences" that gives rise to knowledge that enriches other fields, such as law, engineering, etc. So we see the addition of an environmental dimension to traditional sectors and consequently we have the study of environmental sciences.

In the first case, we are aiming to produce environmentalists with interdisciplinary knowledge who are capable of approaching all the aspects of complex environmental issues and thus create a cohesive action plan for all environmental sciences.

In the second case, we provide the necessary knowledge and skills to traditional scientists who have to adapt their scientific work to an environmental issue. For instance, wastewater treatment is to be planned and designed by an environmental engineer, but it is the environmentalist who will have to coordinate its implementation, taking into consideration the financial, legal, educational, social and ecological elements of the installations. Very often, waste-water treatment plants are not installed, not because the design was bad, but because there are opposing groups that do not accept the installation.

This distinction cannot easily be applied in the field of vocational training. We would say that environmental studies concerns projects of environmental education (or education for sustainability). Environmental sciences seems to concern itself with the greening of the curriculum. Both could apply to vocational education and training.

3. I will now make a few comments on the issues that have been of concern to us here. In relation to the systems of vocational education and training and the market, those systems have to adopt organization, management and administrative structures that have been trained successfully in the market, thus reducing cost and increasing effectiveness.

On the other hand, markets will have to allow educators and their stakeholders (parents and trainees) to have the foremost say about the content of the programmes. The involvement of the market in the content of those programmes could mean that the necessary long-term goals may be removed. That is the responsibility of educators, parents, students and local communities.

In respect to environmental education in education and training systems, it must be integrated throughout the school system. Environmental matters are far removed from the subjects of the curriculum, history, literature, geology, geography, physics, science; all these will have to acquire an environmental dimension. To do this, curriculum makers will have to take into account one of the first precepts of environmental teaching; namely, that national borders are not so important. I claim that there would be international collaboration and international debate to this effect.

Training makes sense if it follows on a good educational system. Just as in the school system, environmental viewpoints will have to go hand in hand with traditional training. Therefore we can develop autonomous training in environmental packages as required by the market. Training institutions will have to be small, flexible, useful and always capable of being abrogated. They will have to transform themselves if they do not bear fruit. We will have to take into consideration that the gigantic, bureaucratic training organizations could become a major obstacle in resolving the problems that they are supposed to resolve. Environmental training could then simply be a source of income for trainers who would continue to run ineffective programmes. In that case, training would provide not to society but to the trainers without any other visible results. To avoid such an adverse effect, we need to create evaluation tools for environmental work. Criteria would be the cost-benefit analysis: whether an agency can obtain further financing from private sources, whether trainees find jobs, etc. The results of these evaluations must be open to the public. If training was to develop in an open-ended framework, then this would make the system more productive.

Naturally, a type of "talk and chalk" teaching would have limited effectiveness. We know that; but there is a host of alternative methodologies – I heard at least 10 being mentioned yesterday and today. A criterion to choose the best, would entail continuity in the means used in education and training production and in everyday life. Nevertheless, we know that we are not in a position today to assess the educational effectiveness of teaching methods such as "computers without teachers". We must admit that we are not in a position to know what the exact educational value of every technology is because research concerning the educational value of a technology is published only once the technology has completed its life-cycle.

The speed in technological change has other shortcomings. For instance, the way that information and technology is harnessed. One should always have in mind the "QWERTY" syndrome: the keys on typewriter keyboards have the specific stupid sequence q, w, e, r, t, y etc, so as to slow down the users. The first typewriters would have blocked otherwise. That is an example of a technology that was made to make things more difficult for human beings, and survived thanks to an important installed base. When the time comes to renew, the installed base of a pioneering technology can block technological renewal. We must be careful vis-à-vis gigantic plans to impose new technologies. Jacobinism is not a very clever counsellor in this matter. Each flexible education and training unit will have to select the technology that it considers produces the best results in the open, competitive environment that we have already described.

Thank you.

5.3 Environmental policies and production *by Mr Dimitrios Tsiros*

Mr Dimitrios Tsiros is Advisor to the Minister of the Environment, Physical Planning and Public Works, Greece

Minister, Ladies and Gentlemen,
by the end of the second world war, the feeling that the planet is small was established for the first time in the human history. Exotic locations in the Far East, Africa and the vast Soviet Union were on the front pages of the newspapers every day and that was normal since the battlefields and the progress at the front were everyone's concern.

Consequently, the mass media, and especially the radio, watched closely. It was not accidental that, for the first time after the unfortunate events, multinational

organizations that stood great chances to survive were formed within the framework of the United Nations. We are talking of the Food and Agricultural Organization (FAO), the World Health Organisation (WHO) and, of course, UNESCO which started their serious endeavours in the mid 40's. These efforts however – one might express this complaint to the larger countries, the wealthier ones – cannot prosper when this international organization, UNESCO, has, as far as I know, an annual budget not exceeding that of a medium-sized or large North American university.

The moral is the same. The tremendous industrial production has impressive results in the west and the result is the rise in the standard of living.

On the other hand, the countries that supply cheap raw material show almost no progress at all since they have to buy the final industrial products generated abroad at far more expensive prices due to the value added abroad. Moreover, in the cases where it concerns producers of typical agricultural products, where prices are relatively low, the wish for industrial development leads to excess external debt, and there is also influx of the labour force from the countryside to the urban centres. This results in a gradual collapse of the agricultural sector and the development of an obsolete and polluted environment doomed to produce car frames but not car engines, if we take vehicles as an example.

The gap between north and south increases. The increase of the birth rate in the third world advances, illiteracy either remains or changes appearance, malnutrition or bad nutrition still exist for millions of people. The green revolution, the intensive and extensive farming so that the hungry can be fed, imposes, amid others, the use of chemicals known as fertilizers or pesticides. So this explosive mixture of basic parameters has inevitably brought to the forefront a lot of problems of major importance: the irrational exploitation of natural resources, the gradual destruction of the ecological balance and the degradation of the quality of life particularly in the larger urban centres.

Therefore, as I mentioned before, with the feeling that all the inhabitants of the earth are in the same spaceship, in combination with the justified concern that, now, the very foundations of life are undermined, we arrive at the mid 60's, and allow me here to deviate a little. Yes, all of us are passengers in the same spaceship, but, as we all know, there are different classes in the ship: there is luxury class, first class, second class; there are the poor ones who work down in the engine room and, if something goes wrong, they will be the first ones to lose their lives. So the initially weak ecological, environmental demand finds an official response in the initiative of the UN: to convene the first world conference on the environment in Stockholm in 1972.

Almost all nations of the globe participated there and they signed the first declaration for the protection of the environment, and also the first foundations were laid for some important agreements of international character. In the same year, the research of the Meadows, from the famous club of Rome, is published under the title "The Limits to Growth" and it was the first time that the concept "sustained development" was put forward. It is a concept that was borrowed from agricultural and agronomic sciences, and particularly forestry, and there it was underlined that what is meant by the term "maximum sustainable yield", is the greatest quantity that can be taken from a population of animals, trees, etc., in such a way that the average size of its population will not change after reproduction.

Throughout this period and until today, with 1992 as the peak when the real summit took place, or rather the second world conference of the UN on the environment and development, we have had a continuous reference to the term "sustainable development". The wish for development showing respect to the environment has been adopted by international organizations. We also have the conclusions of the committee for the environment and development under the title "A Common Future", under the supervision of Ms Gro Harlem Brundtland, Prime Minister of Norway. So, as sustainable development, we define that development which responds to the needs of the present without limiting the possibility of future generations to satisfy their own needs. It is a useful, short definition that can help those further developments. However, we can say that it is man-centred and interested only in the development of the human race.

On the other hand, however, nature has its own rights. Unfortunately, principles like "the "polluter pays", as you know, have many times been reversed, for example, to "the one who pays, pollutes".

Gradually, more and more governments were forced by the sensitized public opinion of their countries, and the not very pleasant reality, to adopt the conclusions and general principles of the summit of Rio. However, they do not convince us that the course will be easy, linear and effective in time. The proof for this is the very timid measures in order to avoid the adverse effects from the greenhouse effect which developed negatively, because, in the beginning, the greenhouse effect was a positive phenomenon because without it our planet would be a frozen star.

However, the scale of the activities of the particular emissions have reversed this phenomenon and rendered it negative rather than positive. It has been estimated that, in order to radically deal with the negative development of this phenomenon, right now the

consumption of energy on our planet should fall to 1/3 and not be reduced by 1/3.

Probably you are very well aware of what is going on. India, with a population 10 times as that of Germany, consumes one-third of the energy that is being consumed in Germany. So, we are talking about a bad distribution of wealth and energy, but, even if this distribution was the right one, according to the model that is being employed, there are still a lot of questions concerning future developments. However, the course towards sustainability, sustainable development, is a one-way street: there is no other choice. A large part, a large percentage of the world public view has understood this, and they keep up the pressure on the authorities. The European Union, in its fifth plan of action for the environment and sustainable development, has set optimistic objectives concerning specific production for wider economic sectors such as industry, energy, transport and tourism.

The strategy of this programme as this was adopted by the summit meeting in 1992, in Maastricht, recognises that the problems of the condition of the environment do not constitute a problem now, but a symptom of abuse and bad management, and the further goal is the change of the development patterns of the European Union for the improvement and maintenance of the prosperity of its citizens. They aim to create new relations between the main categories: namely, the governments, the enterprises, the public and the important economic sectors. They are considering also the issue of increasing unemployment. It is concluded that the appropriate plan, protection of the environment, would actually generate a lot of new jobs.

New technologies which are considered by many people as a menace to the traditional jobs and places of work will increase and will create new opportunities if they integrate the aspect of protection of the environment in such a way that timely prevention is achieved, and not by intervening after the event. Now, considering recent data and estimations of the European Commission, I would like to say that accession negotiations have started with Estonia, Poland, the Czech Republic, Hungary, Slovenia and, very soon, Slovakia, Bulgaria, Romania and Lithuania will follow.

Now, harmonization of these countries with the environmental standards of the European Union is estimated to surpass 120 billion ECU. Now who is going to pay for this vast amount? It seems that the only way out is for the Member States to invest in new technologies, and that this is the only way to attract other dynamic investors and to create more places of work.

On the other hand, who will be the people to take these jobs and what will be their qualifications? Formal education, which is being offered in schools and universities at these times, should be enriched accordingly, and harmonized wherever this has not been achieved. It is clear that the curricula for vocational education and training will acquire a more and more vital character. What is worthwhile for the competent authorities to pay attention to is that the content of these curricula should be modern and adapted to new data.

Now, we know that if the technology of our civilization degrades the environment many times, it is also this technology, this culture, that will help us, will help us face the dead-end in the problems we have. We should do away with, we should withdraw a distance from the attitude of high chimneys which just eject pollution into society. Air pollution does not recognise any frontiers or individual recipients. We should proceed to a comprehensive, documented and timely planning so that pollution is minimized.

This balance can not be achieved otherwise, but only with producers who want, in a legal way, to have profit, but not to the detriment of nature and human health; with citizens who will actually assist activities that are compatible to the environment through their consumption habits; and also with employees and workers who have attended relevant training and education programmes for the environment. Biological treatment, especially for water-waste recycling; environmental education, dissemination of environmental knowledge, knowledge of the environment at the points where decisions are made and the application of the new technologies, are the environmental technologies which require the training and the vocational training of a large number of employees and new executives.

I believe that all that I have mentioned so far has been included in the report of the Ministry for the Environment, Planning and Public Works concerning the foundation of the National Centre for the Environment and Sustainable Development.

This report that accompanies the draft law that was recently submitted to the Greek Parliament mentions that, at the end of the millennium, it becomes more and more clear that what is required is consistent transdisciplinary and very well coordinated policies for the protection of the environment and for sustainable development. These policies should encompass all levels of society; alert and mobilize governments, social and scientific organizations, ecological organizations and the citizens in every domain of society in order to reduce the waste of natural resources and reduce pollution, in order to promote clean technologies and upgrade and improve urban environment and reduce the risks from the irrational use of chemical substances.

What is required is a modern, rational environment policy that will be socially and economically acceptable. Such a policy can contribute towards the creation of further places of work and render the development strategies sustainable for all the sectors of the economy. The EU recognises in the Fifth Action Plan the progress achieved for the environment. What is emphasized, what is underlined, is the necessity to coordinate the various activities, the development of productive activities, the urgency to proceed to measures; and what is condemned is the relatively slow pace, the slow rate of integration of the environmental policies, and, of course here, training and development are included.

To conclude this paper of mine, which I believe is a tiring one for morning sessions, allow me to convey to you the views of the Minister of Environment of Greece, Mr Laliotis, to express gratitude to OEEK for having invited us here.

The fact that we have here such a number of specialists from all these countries indeed constitutes a very optimistic message as far as the achievement of our objectives is. Vocational education and training are the appropriate tools for achievement, both making the market more environmentally friendly and achieving a larger and more efficient sensitization, which is, indeed, rather alertness that will change sensitization to efficient action.

Many of these issues were touched upon by the successful conference under the title "Environment and Society: Education and Public Awareness for Sustainability" that was convened in December 1997, in Thessaloniki, with the initiative of UNESCO and the active support of the Greek Government. In this event, over a thousand delegates participated representing more than 90 countries, and the proceedings will soon be published in English. I would also like to underline that, besides these officials from all over the world, we were honoured by the presence of Mr Mayor, himself, and most important was the active participation of hundreds of teachers, educators in general, whose life's purpose is to provide education to all.

We thank you for being here in our country and we wish you a pleasant stay, and we promise that in the near future we will see each other again.

Thank you.

5.4 Environmental issues in vocational education and training
by Mr Fabrizio Boldrini

Mr Fabrizio Boldrini, born in 1964, is a lawyer. He was Director of the "Centro Formazione Ambiente" of the Region of Umbria, Italy, until 1997. Since 1998, he has been President of "Systèmes Ecologiques", a company specialized in environmental training in research. He is a consultant of the President of the Region of Umbria for matters of the European Union. He has conceived, coordinated and carried out several environmental training courses

Abstract

1. The environmental challenge: the European Union facing the integration of sustainable development and employment growth
2. Criteria and methods for the acquisition of new competencies linked to the environment: a research project launched by CEDEFOP in 1997.
3. An analysis of required competencies and training needs in representative profiles: a new research project to be launched next year.

The environmental challenge: the European Union facing the integration of sustainable development and employment growth

The link between the environment and employment has risen to become a key element in community environmental policies since the early '80s.

The Commission's White Paper "Growth, Competitiveness and Employment: the Challenge of the 21st Century" states that the link between technological development, economic development, sustainable development and employment must be more binding.

The document ensued from a heated debate that started in the late '60s, with the publication of a number of essays which warned the industrial world against the pursuit of an economic approach that did not respect the environment.

These first statements were actually the expression of an extreme movement of ideas linked to the environment that envisaged a deep cleavage between the environment and economic development, as these two fields were deemed irreconcilable.

It was only in 1987, with the publication of the "Brundtland Report" of the UN Commission on the Environment and Development, that an official document forcefully established the concept that the environment and economic development are not two unrelated realities but, on the contrary, are closely linked together: "...development cannot be on the basis of highly degraded resources and the environment cannot be protected if development does not take into account

the anti-economic factor related to the destruction of natural resources..." "...on the other hand, a world in which poverty is endemic will never be safe from environmental catastrophes...". The report gave high priority to the technological development necessary to pinpoint eco-compatible processes and products.

The European Commission, for its part, started the publication of environmental policy guidelines as early as 1972. These guidelines are to be found in the documents titled "Action Plan", listing what should have been the principles and the perspectives of the European environmental policies. We have reached the publication of the 5th Action Plan which is to last until 1999. It is in this plan that one can find the indications for the establishment of coherent environmental policy guidelines which do not hinder the development of the employment market.

In the last few years, the Commission has often stressed (Report: Employment in Europe, 1995) the extent to which the environment can support the European effort towards the overcoming of a deep employment crisis felt in all the countries of Europe. The report estimated that it is possible to create some 250,000 jobs in the environmental sector in Europe by 2000.

A fundamental weakness and a number of perplexities are always to be found wherever it is not made clear how vocational training is to be dealt with within this process and how the role of new professions can be coordinated with the systematic efforts provided for in the Commission's report on competitiveness in Europe.

Solutions to the problem of integration of the various vocational training systems are put forward from every direction.

The agency representing trade unions at a European level (CES) asks for an increased degree of responsibility to be granted to workers in matters of the protection of the quality of life. In relation to the 5th Action Plan, trade unions propose the establishment of workers' rights in matters of environmental protection. This principle follows the lines of the arguments provided for in community directives in relation to job security.

The need for a strong integration through the European system for qualification and initial vocational training raises the issue of the organization of an actual comparison which will allow the establishment of specific systematic training courses which will give enterprises the possibility to use human resources able to meet the technological challenges of innovation, creating within production systems the conditions for the creation of products and processes always more eco-compatible and always more competitive.

This is also to be found in the Kyoto Protocol, in which some essential points remain to be defined:

- the methodologies for the realization of negotiable permits and the strategies of "joint implementation"
- the Clean Development Mechanisms, intended to bring economic and technological benefits thanks to the implementation of industrial processes compatible with the surrounding eco-systems.
- monitoring and control mechanisms
- the execution of long-term agreements between industry and public authorities so as to improve the relationship between technological development, economic development and sustainable development.

These issues will have to be clarified and finalized by a work group who will also have to elaborate a system of CCPMs (Common and Coordinated Policies and Measures) which can lead us to new planning initiatives on innovation and technological improvement.

Economic implications (clean technologies, support and subsidies, voluntary agreements, technical options, structural interventions) determine the need to create qualifications, training, and professional courses which will be able to integrate the environmental dimension in the development options.

Even very clear statements on the strong relationship between the environment and employment are not always reflected in the implementation of EU policy in key sectors such as agriculture and the enlargement of the Union.

Agenda 2000 states that in order to be able to meet the environmental challenges ensuing from an enlarged union, the Community must provide for a more efficient implementation and execution of the "acquis Communautaire" in environmental matters.

A pre-accession aid programme to be taken from a 45 billion ECUs fund will be set in place in the year 2000. An amount of one billion ECUs per year has been specifically provided for in the field of transport and the environment.

However, if we look at the Commission's proposal on the pre-accession instrument, we realize that no role is attributed to vocational training as a way to assist the implementation of structural actions. As to the CAP, one could make the following observations: support to farms favours mainly intensive production instead of supporting efforts to strengthen a management system which respects the environment.

The training developed in Europe, thanks to the resources made available by objective 5b, has been used in order to ensure support to agricultural enterprises and only a minimal part has assisted the efforts of job creation in the field of biological and alternative agriculture.

Reading Agenda 2000, one does not get the impression that things will actually change. No indication leads us to the conclusion that there will be a change in trends leading to the establishment of a more systematic effort for the development of a coherent system of relationship among the creation of employment, competitiveness and sustainable development.

One hopes that job creation will be at the very heart of programme planning, implementation and follow-up; a higher degree of attention should be paid to the use of regional resources and competencies with a view to creating jobs.

For this reason, an important part of resources will have to be allocated to the field of innovation in terms of products and processes so as to increase competitiveness and innovation in the field of an environment-friendly production.

Criteria and methods for the acquisition of new competencies linked to the environment: a research project launched by CEDEFOP in 1997.

Within this context, in order to give governments and social partners pertinent information on the development of qualifications and professions in the field of the environment, so as to help them establish a coherent system of relations between sustainable development and job creation, CEDEFOP developed in 1997 a research project focusing on "new qualifications and needs in training in the fields linked to the environment".

This project is based on three assumptions:

- the protection of the environment is one of the promising sectors for job creation
- the improvement of the protection of the environment requires new activities and new competencies from different actors
- the role of social partners appears to be essential for the development of pertinent training actions.

Research focused on two axes:

- the study of the impact of changes linked to the protection of the environment on the labour market,
- the study of the relation between observed changes and the input of new competencies.

The study described innovative projects in emerging fields. We can note that these projects are based on partnerships between the various actors and on the stimulus of public authorities. The conclusions of the research show that the organization of training systems for the creation of new competencies linked to the environment pertains to all levels of qualification all the way to university qualification of the highest level.

The establishment of efficient strategies for the protection of the environment requires the creation of new competencies for professional profiles already integrated in production systems, for which it is necessary to organize on-going training activities so as to render them able to sustain the changes ensuing from the modification of the legislative and production context.

For instance, the introduction of limits of gas emission in the atmosphere entails the realization of more sophisticated treatment systems which, in turn, makes the presence of specialized technicians in an enterprise necessary.

However, the change in the technical and legislative context requires the availability of new human resources able to be integrated in enterprises. For this reason, an appropriate initial training is necessary in order to allow for the development of employment. It is the case of the introduction of the environment management system in enterprises as provided for by the EMAS regulation and the ISO 14000.

The CEDEFOP report highlights the fact that enterprises opting for the implementation of an EMS have problems in finding in the labour market young technicians who have participated in initial training projects focusing on the development of EMS. This is particularly true in Italy and in France where environmental training managed by local authorities is not making sufficient provision for the planning of training courses in this particular field.

On the other hand, the difficulty in finding already trained profiles is remarkable, particularly if we are to take into consideration the new emerging professional profiles: environmental manager, waste-site guardian eco-advisor, river-maintenance agent. These new professional profiles do not show the most important new competencies linked to the environment where the development of existing qualifications brings together traditional competencies and specific competencies linked to the environment.

New competencies required by the employment market are not only technical, but focus also on more advanced fields such as communication, organization, analysis method coordination, and project planning.

The weakness of training systems in EU countries is to be seen in the fact that job creation linked to the environment follows the implementation of model

projects realized by or in cooperation with public authorities and social partners.

This is the case of the agreement reached at a local level between public authorities and the organizations representing employers on the diffusion of the EMAS system. In this case, enterprises are encouraged to look for new competencies or to develop these competencies among their employees. Often these projects provide for financial support for the implementation of training courses or for investments in new human resources.

This shows that in most cases public authorities and social partners play an important role in the development of job creation linked to the environment. However, this also shows that there is no real system of structured training but a training – whether initial or continuing – linked to pilot projects.

In order to pursue the implementation of projects for the acquisition of new competencies linked to the environment, several work lines have been updated:

- taking into account competencies linked to the environment in initial vocational training and the establishment of corresponding continuing training actions;
- supporting and recognizing innovative experiences of continuing training interacting with learning projects;
- updating projects for the re-qualification of low-skilled workers in jobs linked to the environment (garbage collection, recycling...) allowing for a higher quality of services linked to the environment;
- projects for the certification of individual courses for the acquisition of competencies from professional experience, professional skills, individual search for information by various means...

Finally, one should stress that in the field of the environment the input of new competencies is indispensable to the development of new services and for ensuring the maintenance of competitiveness. This requires an active answer to the needs of enterprises and public authorities so as to allow for the creation of employment.

In conclusion, the most crucial points recorded are:

- the creation of employment is often linked to model projects supported by public authorities;
- enterprises and public authorities, feeling the need to have specialized personnel, organize training courses in order to meet these needs, since there is no system of organized training providing for these needs;
- there is to date no structured relationship between the demand and the supply of professional profiles in the field of the environment;
- training courses are not homogeneous and no standard of certification of competencies exists.

An analysis of required competencies and training needs in representative profiles: a new research project to be launched next year

Within the course of the research presented by CEDEFOP, it appeared that emerging professional profiles such as

- in-house environmental research,
- technical experts in charge of missions focusing on the environment within a local community,
- an advisor-trainer or eco-advisor assisting enterprises,
- an operator within an enterprise implementing an environmental management system, and a
- waste-site guardian

do not have a uniform training course even within Member States.

Training courses established by public authorities or by private training centres have different contents in relation to the realization of similar professional profiles. For instance, one can find initial training courses for environmental managers in enterprises which focus on the creation of specialized personnel for the implementation of environmental management programmes or – under the same heading – one can find expert technicians dealing with water cleaning or waste management.

However, the development of legislation and public awareness push public authorities and enterprises to pay particular attention to environmental problems. This leads to a growing demand for specialized profiles. But it is not always easy for enterprises and public authorities to recruit the necessary profile in the labour market; it is particularly difficult to know the supply of training in the field of the environment unless courses are integrated within pilot projects.

Research will carry out an analysis of the training supply at all levels in order to update for each professional profile the training course followed as well as employment courses. This will make it possible to ascertain what reasons hinder the creation of an organized training system and what reasons cause a difficulty in the circulation of information between training operators and the labour market. It will also be necessary to determine which system could be implemented in order to reach a professional profile certification recognized by all operators.

The research will have to provide an answer to four fundamental questions:

1. To what extent competencies linked to the environment are stimulated by the context and to what extent they stimulate it? For instance, did the introduction of ISO 14000 boost the identification

of specific competencies within enterprises and did it lead to higher awareness of consumers in relation to eco-sustainable products?
2. To what extent the lack of competencies linked to the environment hinders the development of new activities in the field of the environment?
3. Once new competencies required by the context have been pinpointed, which activities of first and second level training are able to satisfy these needs in terms of competencies and how can they be certified?
4. What is the real supply in training? What are the sectors of analysis, training methodologies (e.g. continuing training, distance training, etc.) and which new methods must be used so as to certify acquired competencies?

The research will have to be able to draw specific proposals for a better level of coordination between employment and training.

Conclusions

The research findings will provide the Member States involved in the study with recommendations for a better formulation of environmental training policies.

5.5 Environmental issues in vocational education and training *by Mr Michael Härtel*

Mr Michael Härtel, born in 1958, is a sociologist. He is a member of the Scientific Staff of the Federal Institute for Vocational Training (BIBB) in Berlin, Germany. He has monitored and evaluated pilot projects promoted by the European Union, and launched projects for initial and continuing training in Jamaica, Costa Rica, Nicaragua and Zimbabwe

Abstract

The paper addresses the significance of the discussion on ways of securing sustainable development in initial and continuing vocational training.

The move towards environmentally benign work and production structures can only be sustainable in the long term with the informed and active involvement of suitably skilled staff from skilled worker to management level. Therefore, high priority is being attached in this process to giving vocational education and training an environmental orientation.

The paper presents examples for the craft and industry sectors to illustrate possibilities of creating the necessary framework conditions for initial and continuing vocational training in both the school and the corporate sectors.

Information on schemes to support the implementation of pilot projects to further improve initial and continuing vocational training round off the paper.

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Mr. Chairman, Excellencies,
Dear Guests and Colleagues,

Environmental protection or the environmentally benign treatment of natural resources has become a task of society over the past ten to fifteen years. The debate on the environment today extends to all areas of our lives and economic activity. It has made protecting the environment a task for all individuals, not just experts.

Seen in this context, the ecological modernization taking place can be perceived as a structural change with a particular quality. Its characteristic features are only now gradually becoming apparent. Whereas in the 1970s the ecology issue was primarily a matter of criticism of economic growth, in the 1980s it was environmental technology and environmental policy that dominated the debate. A flood of information by both business and society on strategies for environmentally cleaner action has impacted on the 1990s. The increasing understanding of the need for strategies to give a clear environmental orientation to initial and continuing vocational training holds particular importance.

I am very pleased that in this presentation I can give you an overview of some baseline development trends and options for action.

With its 5th Action Programme on Environmental Protection, for example, the European Union makes clear the priority which it attaches to this issue. The programme, adopted by the European Union on 1st February 1993, covers the period up to the year 2000 and is based on the concept of "sustainable development". It makes a specific issue of integrating environmental protection into economic development. The programme provides for implementing such integration strategies in the important areas of industry, energy, transport, agriculture and tourism.

Sustainable development signifies a long-term approach to economic and social development which acknowledges that natural resources are finite and avoids overtaxing the regeneration capacities of the natural world and its flora and fauna.

This approach is taken from forestry management where sustainability means cutting down trees only at the pace at which the forest will regenerate and the quality of the soil will not be impaired.

The term "sustainable development" acknowledges that economic, social and ecological development necessarily has to be seen as having an inner unity. It is to this that the decisive progress in insight achieved with the sustainability concept can be traced back.

In 1992 the United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro. Alongside conventions on the climate (the Declaration on Desertification was given convention status in 1994) and on biodiversity, the Forest Declaration and the Rio Declaration, it is the action programme entitled "Agenda 21" which warrants particular attention. Agenda 21 contains detailed recommendations for action to bring about sustainable development in all important areas of environmental and also development policy.

And, for the first time in the history of the United Nations, the catalogue of activities sets out to give substance to the programme's philosophy ranging in scope from global to local. Agenda 21 was adopted by 178 states. In 1992, the United Nations then also set up a Commission on Sustainable Development (CSD).

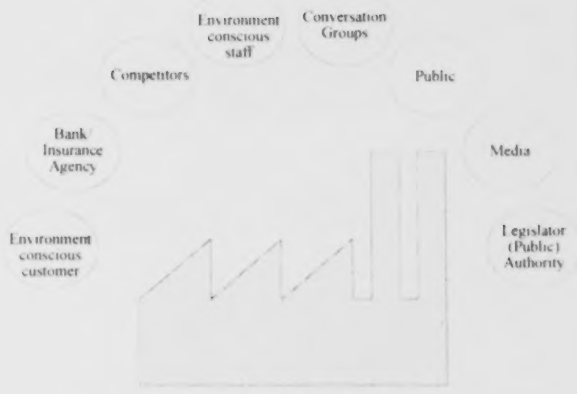
In an extraordinary session held in June 1997, the United Nations extended the mandate of the CSD. It called upon UNESCO – the United Nations agency responsible for coordinating environmental education – to submit to the CSD a detailed programme, already coordinated with the various UN agencies, for implementing Chapter 36 of the Agenda 21 document. Chapter 36 sets out Agenda 21's own action programme for the fields of education, public awareness, and training.

These activities at political level should be seen within the context of an increasing environmental awareness by the public at large, an ever more apparent scarcity of resources, and the constant toughening up of environmental standards.

The environmental impact of goods and corporate production processes turns out, under these circumstances, to be an important factor affecting competitiveness.

If a company is to avoid dropping back into a strategically unfavourable competitive position in the longer term because of inadequate attention to environmental legislation and consumer behaviour, its decision-makers must today take more account than ever before of ecological considerations.

Economic growth is therefore not only desirable, but should also be striven for in a format in which sensitive use of energy and other resources goes hand in hand with other measures to take the pressure off the environment in all important fields.



Environment-conscious Management

For environmental damage incurs costs which are initially visible at the macro-economic level but are also becoming increasingly apparent at the micro-economic level. Environmental assets such as clean water, clean air, uncontaminated soil and a stable climate are the bases not only for the very existence and future of all life forms, but also for agricultural, industrial and artisan production. In addition to strengthening the domestic market, environmental expertise and know-how can develop into a sought-after export line.

Permit me to illustrate this with some figures:

The global market for environmental protection products is regarded as a dynamic growth market and, according to OECD surveys, has a volume of ca. 430,000 million DM in 1998. There are concurrent forecasts for further growth, ranging from 5 to 6% annually (OECD) and 7.5% (Environmental Technology Export Council of the USA), to 8% for the period 1995/2010 (Japan's Ministry of Industry MITI).

Every occupational activity, be it manufacturing, maintenance or a service, uses materials and objects which contain environmental resources in their natural or a processed form. All occupations have direct or indirect links with the environment. Occupational activities therefore hold risks to the environment but also potential relief for the pressures weighing on it.

A modern, far-sighted environmental policy therefore attaches particular importance to companies and their workforces implementing sustained environmental protection measures on their own initiative. A company management team which is conscious of this challenge can identify three areas for ecological action, each with its own characteristic implications:

1. The company as a field for ecological action
2. The product as a field for ecological action
3. Communication as a field for ecological action.

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As a site of productive activity, a company wanting to pursue a far-sighted corporate strategy must identify its environmental impact and reduce this to a minimum.

The positive effects here: avoidance of ecology-associated risks, and cost savings in areas such as material consumption, energy consumption, installations, production process, transportation, logistics and waste management.

The product life-cycle is the second field for ecological action and it concerns not only the phases of that cycle spent within the company, but also all those which lie upstream or downstream in the product life-cycle. Directly affected here are the product development, marketing and logistics functions. The concrete goal of measures taken in these areas is to identify and reduce environmental impact throughout the entire life-cycle of the product. This automatically entails avoiding risks and, as an additional effect for the company's strategic position, enhances the company image by showing it to be environmentally active to its customers and the sensitized public.

Of relevance here are the areas of product design, product contents, production processes, product service – life and packaging design – in each case specific to each individual product. Also important in this context are new and more extensive forms of cooperation with agents located at other points in the product ecology chain: for example, partnerships with recycling and safe disposal companies.

Concrete points for action relating to customers can be found in reducing waste costs, energy costs, emissions, noise, and risks to the customer. The positive image that is thereby built up can be used for a planned and professional environment-oriented competition strategy which can in turn be a valuable market advantage.

Implementing such measures has not only a technical dimension, but also, and more importantly, a communications dimension. The third area for action, namely effective communication and a transparent flow of information, is therefore of fundamental importance for successfully planning, implementing, monitoring and further improving environmental action strategies within a company. Such a dialogue provides a framework for exchanging information, views, interests, needs and also reservations. Communication thus becomes a professional instrument that can be used as a management tool.

All the activities referred to are directly interrelated and can only produce the desired effect if they are continuously coordinated and implemented within the framework of a personnel management, training and organizational development strategy which is based on cooperation.

Areas for Ecological Action

The focus of all areas of action has to be the employees, these being the main agents for carrying out the ecologically relevant actions. One of the most important preconditions for environmentally benign production and distribution is skilled personnel that can creatively analyse the environmental issues specifically relevant to their company and its operations, and, by drawing on their expertise, creativity and teamworking skills, help adapt the production operations to meet environmental criteria.

This necessary condition reaches out beyond the still widespread notion of occupational activity involving a strictly delimited, specialized field of action. It expands it to cover the area which appropriately – environmentally – geared initial and continuing vocational training instils in the working individual; namely, the impact of his or her occupational activities on the environment.

But, wherever possible, all members of the workforce should acquire the understanding and competence to recognize the environmental impact of their own activities and take responsible and appropriate action to deal with it.

One of the goals of vocational training is always to develop the young person's personality. This is something where occupation-oriented environmental education is particularly effective because of its commitment to the cross-occupational task of conserving the natural resources without which life could not exist. Seen within this context, developing environmental competence in relation to one's occupation should be understood as a superordinate and general learning goal of vocational training and also be officially established as such.

In this sense, environmental education is an integral part of vocational training. On the other hand, from the viewpoint of its goals in terms of the training content and process, environmental education is a new task, a

new mandate for both school-based and company-based initial vocational training.

It is no longer a matter of just providing for vocational training to develop the knowledge, skills and abilities needed to cope with the technical and ecological aspects of protecting the environment. In the light of the principle of sustainable development already referred to, the new sustainability quality in vocational training has to be sought in reviewing the correlation between production and consumption. Changes have to be brought about in corporate operations in order to safeguard the very bases of life for future generations. The mandate for training is therefore to develop a competence for helping shape the work environment and, in the final analysis, society as a whole. Vocational training has to accommodate these new demands.

Those who are engaged in planning or delivering initial vocational training therefore face the task

- of anchoring environment-related occupational skills in initial and continuing vocational training
- and checking the extent to which occupations in environmental protection can serve a useful purpose and are actually in demand on the specific labour markets.

How can this be done?

There is undoubtedly no single ideal way of solving the problems referred to here.

A variety of activities are needed and have indeed now been initiated in order to develop sustainable solution strategies. The following are some examples and proposals in this respect.

The most obvious option is to assess occupational activities directly from the viewpoint of protecting the environment and investigate possibilities of modification and change. Being a cross-sector issue, environmental protection plays a role in all occupational fields – though sometimes more and sometimes less visibly so. In order to gear environment-related issues in vocational training to the future occupational roles of the trainees, there is a need:

- to address environmental relevance in each element of the training content,
- to point specifically to the environmental problems associated with occupational activities,
- and to present options and potential modes of conduct for making occupational activities more environmentally benign.

Further and more detailed differentiation is possible depending on the occupational profile and training structure concerned. This could remove the present demarcation between occupation-related technical skills on the one hand and skills for protecting the environment on the other. Matters relating to environmental protection could then be perceived as a fundamental element of occupational activity.

The specific possibilities for delivering environmental education within vocational training, however, must always be examined within the context of the prevailing vocational training system and all delivery concepts must be designed accordingly.

Employers who are introducing training elements to promote environmental protection should proceed in a pragmatic manner. In the initial stages it seems to be important to select activities for ecological re-engineering which will have the immediate effect of reducing or eliminating environmental pollution. What is important here is that the persons concerned should see clear results and thus understand and treat environmental protection matters as a significant part of their occupational activity.

Waste generation and material consumption are environmental issues in virtually all work processes and are therefore excellent starting points for action. Further important topics are energy and process technologies. The same also applies to the final products and services which the trainees help to produce.

For example, specific learning goals relating to environmental protection were formulated in Germany in 1987 for the foundation training element of initial vocational traineeships in the industrial metalworking field; these goals are listed under the heading "industrial safety, environmental protection and rational use of energy" and require:

- "naming the most important regulations on protection against emissions, water protection and clean air which are currently applicable to the company in which the training is being undergone;
- naming forms of workplace-induced environmental pollution and contributing towards reducing such pollution;
- naming the types of energy used in the training company and describing possibilities of making rational use of energy in one's own and neighbouring work environments."

The correlation with environmental protection often become apparent as detailed occupational activities are learned about and practised. When, for example, in servicing motor vehicles the trainee is required to *check, top up and change brake fluid and hydraulic lubricants in compliance with servicing regulations*, carrying out these procedures correctly – which is a specific learning goal for the trainee – signifies the appropriate and thus environmentally sound handling of these mineral oil products.

Protecting the environment is thus integrated into work procedures. The training contents are constantly updated to take account of changing requirements.

The fundamental importance of environmental protection and the corresponding training for the workforce can also be clearly seen in the construction industry for example.

Waste building materials are a major environmental problem in the construction sector. They account for 80% of the total weight and 60% of the total volume of all waste materials in Germany. In 1992, rubble, building-site waste and waste road-building materials amounted to 68 million tons; to be added to this volume are 215 million tons of excavated earth.

The main option for solving this problem is prevention as a means of reducing resource consumption. Waste management, the correct handling of hazardous substances, preventing air pollution, energy management, environment management and communication are all important areas of action here for which the workforce must continuously be trained. Only then can an environmentally-oriented building-site logistics system be really effective and ultimately produce direct and considerable cost savings. On large-scale construction sites, an intelligent waste logistics system can reduce costs by up to 100,000 DM or even more.

Another example: in technical services management in building, the use of renewable energy sources can be seen as one of the most effective means of assuming responsibility for the environment. This applies to both residential and non-residential buildings.

The sanitation, heating and air-conditioning trade, which covers the occupations of gas fitter, plumber, and heating and ventilation engineer, is able to make an important contribution towards ensuring that building management is ecologically sound. Generating heat for space heating and hot water purposes alone accounts for approximately one quarter of the total CO_2 (carbon dioxide) emissions into the environment.

There is a wide range of options from a simple water-saving tap to complex integrated systems of building automation, via a rainwater-recovery plant and solar equipment, to help take the strain off the environment.

Additional job-creation effects are expected in Germany, for example, when lower statutory emission limits for heating systems in residential buildings take legal effect and some 5 million non-compliant heating system boilers have to be modernized. Estimates suggest that 13,000 new jobs will thereby be created.

The skills required in this sector, especially in the craft occupations within it, are no longer restricted to competence in handling materials and technological equipment but are rapidly moving towards competence in customer consultancy and service on ecological questions. Communication skills, the ability to advise and a service approach are the attributes of new skills that are of central importance for a sustainable craft sector.

Taken as such, this description of occupational competence within the context of environmental integrity fulfils the criteria for a high-quality initial vocational training.

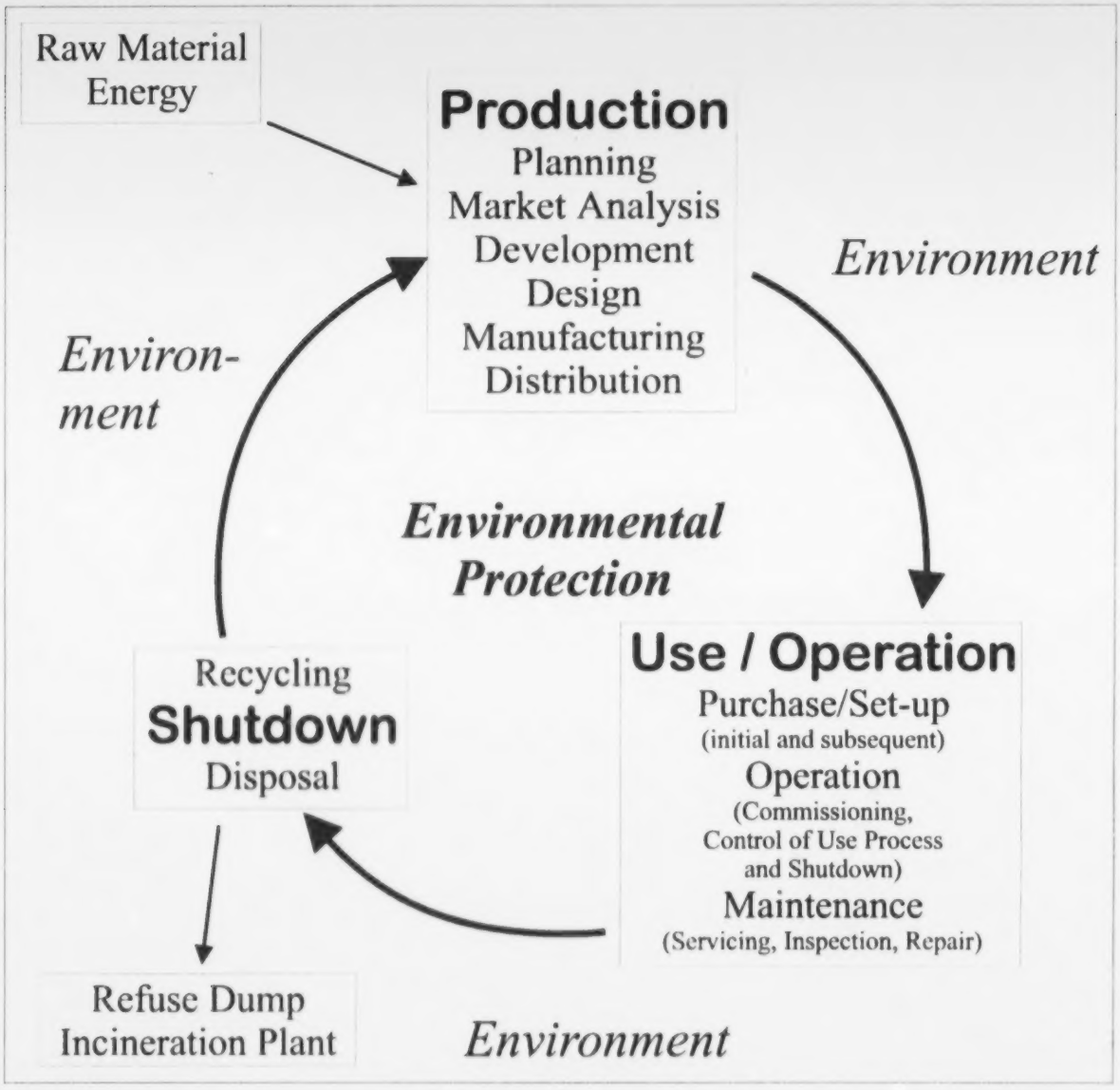
Or to put it the other way round: a high-quality vocational training is always one which makes it possible for the trainee to acquire competence in carrying out his or her work in an environmentally sound manner.

Giving an environmental dimension to vocational training has to proceed from the fundamental concept of prevention.

A priority goal, therefore, is to avoid environmental contamination wherever possible and to conserve natural resources. If avoidance is not possible, recycling and reuse are alternative options. In cases where disposal is unavoidable, every effort must be made to ensure that the disposal is carried out properly and in a manner that does minimum harm to the environment

Effective environmental protection is more than just applying technical knowledge and complying with standards and regulations. To act with environmental integrity, it is of utmost importance that the individual understands the consequences of his or her own actions. Understanding can neither be forced on individuals, nor can it be learned. It is the outcome of a process of enlightenment and evaluation based on weighing up damage and benefit. Developing understanding therefore has to be at the centre of efforts to deliver environmental contents within training processes.

Teachers and trainers thus play an outstandingly important role in implementing such training. The demands placed on them here extend beyond the traditional competence in their subject because their function as a role model changes when environmental protection is factored in. What is required is the greatest possible consistency between what is taught relating to the environment and the teacher's or trainer's own actions. Carefully focused training of trainers is therefore a prerequisite for the successful transfer of environment-specific information in initial vocational training.



Product Life Cycle and Environmental Protection

Training personnel must themselves have an understanding of the environmental implications of their occupation. They also need skills in planning, organizing, designing and evaluating the learning processes taking place under their supervision.

Further helpful tools for introducing and supporting environmentally sound initial and continuing training are the so-called environmental management systems.

Since April 1995, conditions must be met in the Member States of the European Union for participating in the Community system for environmental management and auditing under the European Union Regulation on the Eco-Management and Audit Scheme EMAS. The regulation provides for environmental audits to be carried out on manufacturing plants to uniform standards across the Community.

The aim of these voluntary eco-audits is to encourage companies to undertake, on their own initiative, continuous improvements in the environmental performance of their operations by setting up an environmental management system and subjecting their environmental performance to regular internal and external audits. A positive audit result is certified, and the plant concerned is permitted to refer to the certification in its advertising.

The environmental management system operating to international standard ISO 14001 is of worldwide validity, but it differs from the European Union eco-audit insofar as the continuous improvement process

refers less to the company's actual environmental performance than to its environmental management system as such.

The central element of the European Union eco-audit is a holistic, integrated and preventive approach to corporate environmental protection activities. The environmental pollution emanating from the plant is to be identified and measures are to be taken to reduce this. The "Eco-Audit" Regulation – and this is the decisive point in our analysis – makes clear the need for environment-related training. Its preamble states:

"... the application of environmental management systems by companies shall take account of the need to ensure awareness (key concept: communication) and training (key concept: skills) of workers in the establishment and implementation of such systems"[2].

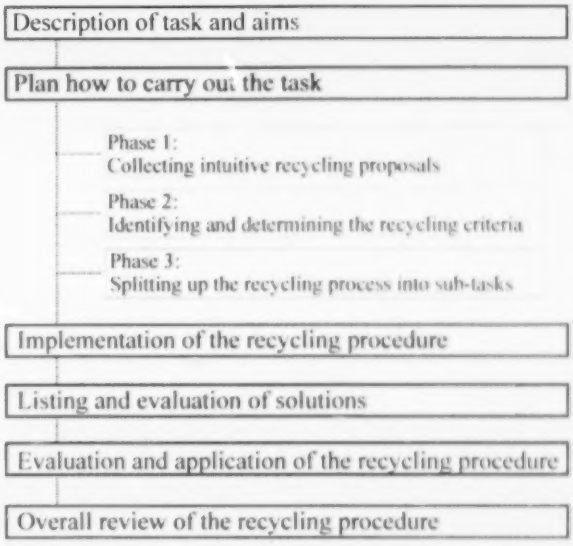
An environmental audit can be understood as the point of departure and tool for dedicated environment-related training for the staff that will allow for an environment management system to become effective across the borders between company divisions.

The eco-audit offers a variety of methods and instruments for action-oriented human resource training. They include analysis and job assignment procedures, work with checklists and learning-by-discovery questions, exploratory work, tests, experiments, measurement procedures, document analysis, surveys, and the drawing up of life-cycle assessments and environmental reports. This list of abbreviated notions can serve as a kind of checklist for training planners, training personnel working within companies and teachers employed in vocational education.

Its rough structure allows for the gradual development of a finely-tuned training module for venturing into the field of occupation-related environmental education. The particularly valuable feature of this approach is that it can be applied to all occupations across the board. It must always build up on the conditions actually prevailing within the company, at the workplace or at school. Disruptions or accidents that have actually taken place can be incorporated into the training. Further differentiation is both possible and recommended.

What can a single trainer or an expert who is engaged in planning initial vocational training do to start concrete action? A work programme to develop environment-related training contents could, for example, thus initially identify environmental performance deficits known to exist in a particular occupation or in the training for that occupation and then determine strategies and measures to remedy these.

A second step would be to select priority topics for which learning modules and projects could be developed. Information packages on topic-related environmental protection issues, relevant legal provisions and economic considerations could additionally be developed for each priority topic together with concepts for didactic and methodological design.


Description of task and aims
Plan how to carry out the task
Phase 1:
Collecting intuitive recycling proposals
Phase 2:
Identifying and determining the recycling criteria
Phase 3:
Splitting up the recycling process into sub-tasks
Implementation of the recycling procedure
Listing and evaluation of solutions
Evaluation and application of the recycling procedure
Overall review of the recycling procedure

Recycling Task

Training implementation would then be tested and evaluated in a third step involving selected companies and schools and also by a process of consultation on contents and procedures with the training personnel concerned.

Once the trial phase has been analysed and evaluated, experience shows that the concepts are then modified – step four – before a manual on "Environmental Protection in Vocational Training" can be disseminated for use by training practitioners.

In a similar procedure carried out over the past four years within the framework of a research and development project, the German Federal Institute for Vocational Training (BIBB) has developed a basic concept for occupation-related environmental education.

It has thus been possible to produce manuals for teaching and training personnel preparing young people for occupations in metalworking, electrical and electronic engineering, motor vehicle technology, building, chemicals and commercial fields.

All manuals adhere to a standardized structure and are composed of three parts:

2 Haurand, G./Pulte, G.: Umweltaudit: Normen, Hinweise und Erläuterungen, Berlin, 1996

1. Introductory aids on preparing the training and instruction;
2. Cross-occupation and occupation-specific training contents, e.g. on maintenance and recycling in industrial metalworking occupations, on timber protection, and sorting and reducing waste on building sites in construction occupations;
3. Systematized information on topic-related legislation and information sources, and a glossary.

This common basic structure attaches particular value to the advantages of repeat recognition in occupation-related environmental education.

It has to be conceded, however, that the demands to be met for such environmental education extend beyond the capacities of initial vocational training. Subsequent advanced and continuing training measures that are specifically geared to an individual company and workplace therein represent an essential follow-up.

The recommendations for cleaner business operations derived from the principle of sustainable development have, in some cases, given rise to some very concrete activities in the fields of both training and work. My description of how environment-related education is being integrated into standard training and work procedures illustrates this in detail.

Underlining that, Germany recognizes, for example, one traineeship occupation in the environmental technology field, that of the supply and disposal engineer, and the training for this occupation entails three specializations, namely water supply, waste-water management and solid-waste management.

In addition to giving initial vocational training an environmental emphasis, action can also be taken at the continuing training level by offering adults possibilities of acquiring skills in environmental protection. Such continuing training measures enable people to consolidate and further develop necessary knowledge and skills in environmental protection and to update these in order to keep pace with constantly changing circumstances. Provided that such continuing training schemes are available, it is readily possible to acquire environmental competence even after completion of one's initial vocational training.

A distinction can be made here between two categories of people, the "environmentally specialized skilled personnel" and the "environmental generalists".

Environmentally specialized skilled personnel have zundergone initial training for a conventional occupation and work; for example, in a technical occupation in the construction industry. They have additionally undergone continuing training in an environmental specialization that is of relevance to their occupation. The nature and extent of their environmental expertise can vary considerably depending on the importance of environmental protection in their particular occupation.

Environmental generalists such as environmental technologists and environmental engineers, by contrast, have acquired expertise in numerous basic subjects and in several environmental fields, usually by attending courses in post-secondary or higher education. Drawing on their broad-based training they are qualified to carry out broader, interdisciplinary tasks in environmental protection; for example, the planning, coordination and monitoring of regimes to comply with environmental regulations in the industrial and craft sectors.

A further strategy to establish occupational activities within a context of protecting the environment merits being mentioned here. Efforts have recently been made in the USA to set up initial training courses at community and technical colleges to service the currently rapidly expanding environmental technology market.

Graduates from these colleges are assisted by a non-profit organization, PETE (Partnership for Environmental Technology Education), in finding placements on the labour market. The aim of preparing, promoting and arranging partnerships between educational institutions, industry and state bodies is intended to directly support

- efforts to meet the needs for better education and environment-oriented initial vocational training within the country;
- the transfer of environmental technology;
- the involvement of under-represented minorities and women in the environmental field;
- economic development in the USA and to promote its international competitiveness.

It is assumed that this strategy will establish occupational activities in environmental protection as a permanent phenomenon on the labour market.

Finally I would like now to turn to the question as to how additional activities to develop and implement environment-oriented initial and continuing training activities can qualify for financial support – at least in their initial phase. After all, there is no natural law that ensures that something that is useful will automatically be implemented in practice. It is very often a simple question of revenues.

It is particularly difficult for small and medium enterprises to innovate in training, in human resource and organizational development, and in production without external financial support.

A possibility of obtaining additional resources for developing new approaches to initial and continuing

vocational training is offered, for example, by the LEONARDO DA VINCI programme of the European Union, something to which I would finally like to draw your attention.

The LEONARDO programme is intended to be a response to the need for change in initial vocational training systems within the European Union. The principle underlying the programme is that of lifelong learning, and this principle reappears as a policy issue throughout the entire programme.

More than 100 transnational projects on environmental education and training received support from the LEONARDO programme in 1996. The issues addressed included, for example,

- the development of initial training for company environmental protection officers (a project coordinated in Vienna),
- environmental education and training in the fields of water management and agriculture (coordinated in Brussels),
- a training of trainers project on environmental protection (implemented in Malaga),
- a further such project with specific reference to the metalworking industry (implemented in Madrid),
- and a training scheme for environment managers in small and medium enterprises (implemented in Reykjavik).

Enquiries about applications for support can undoubtedly be made at the so-called national coordination centres in the Member States of the European Union. An up-to-date address list is appended to this paper.

These programmes also consider applications for carrying out specific projects from countries that have an association agreement with the European Union, although to differing extents. I understand that representatives of the European Union are present at this meeting, and they can possibly supply further information.

Information on a number of other European Union promotion programmes which also address the subject of environmental protection; for example, the SOCRATES programme on general education or the LIFE programme, can be requested from the European Commission, Directorate-General 22 (Education, Training and Youth), Rue de la Loi/Wetstraat 200, B-1049 Brussels.

Undoubtedly also worthy of mention in this connection are the programmes which are specifically intended for the States of Central and Eastern Europe, namely PHARE and TACIS. The OECD, the ILO and, last but not least, UNESCO are further organizations which were quick to discover the significance of environmental education and are running a number of activities in this field.

I hope that my presentation has given you some helpful ideas on this subject and would be pleased to answer any questions you may have.

Thank you for your kind attention.

6 The Changing Role of the Public and Private Sectors in Vocational Education and Training

6.1 Introduction *by Ms Merete Pedersen*

Ms Merete Pedersen is Chief Advisor at the Ministry of Education in Denmark

Chairman, Ladies and Gentlemen,

Thank you for this opportunity to introduce Thematic Unit C: the changing role of public and private sectors in Vocational Education and Training (VET). We will be addressing quite crucial questions this afternoon with the help of colleagues who will take us through three sessions:

- on the public sector in VET systems
- on the complementarity of the public and private sectors and
- on financing issues in VET.

Yesterday and this morning we covered some of the challenges that we face in VET as to new technology and environmental issues in connection with VET.

As if that is not enough, more challenges are to be dealt with in this unit since the respective roles of public and private sectors would include perspectives in connection with not only

- technology and
- environmental issues, but also
- international competition.

Allow me to digress to my own country, where in many companies you would increasingly meet nice citizens of India in jobs related to information technology. Why? Because it does not matter whether the new guy on the computer systems works in the office next door or from his home in Madras or in the Indian

countryside; and because we do not manage to meet the demand in our own VET systems in Denmark. That is the kind of thing we are up against in national – or European for that matter – VET systems.

Further, we also have to consider perspectives such as
- public welfare for citizens and
- democracy as such.

Why would we have to take on the world – huge issues or, at least, perspectives – when dealing with the roles of public and private sectors in vocational education?

Because really VET has more than one role in all of our societies – or ought to have more than one.

Vocational education must of course provide for a qualified workforce in an ever-changing world of work. But VET must also take on the additional role of preparing, especially the young vocational students, for the role of citizens educated for democracy, including the difficult ability to orientate themselves in the development of their own country as such and to participate in that development.

No one should be excluded from work or from participation in our common life in a society, and vocational education for young people plays an important part in securing this.

The crucial question, therefore, is to ask what roles public and private sectors should plays in promoting
- access to training – for everybody, including the less academically inclined citizens
- quality in training, including training for work and for life in a fast-changing society and
- appropriate financing arrangements

As I see it, the public sector is, and remains, very important in vocational education. The public sector must take on the primary responsibility for VET policy, including securing and maintaining relations with all partners in the field.

Good VET policy is, for me, policies that
- aim at the future rather than at the administration of present arrangements
- aim at society's needs, including the needs of the labour market – in general rather than in the specific interests of specific companies
- aim at the needs of individuals with different abilities and interests: students have different ways of learning and individual approaches which should be reflected in teachers methods
- aim at a coherent system – horizontal as well as vertical – it being extremely important for the attraction of vocational education systems that VET students have possibilities for further development: further training and/or study
- aim at steady improvement of the quality of training in schools as well as in companies

The public sector has specific responsibility for
- combating social exclusion – room for everybody including the less academically inclined, the young, women, etc
- preparation for lifelong learning. Learning how to learn. In my country – and no doubt in yours too – the specific vocational qualifications of VET students tend to be close to outdated before they even receive their licensing paper for their future trade. The ability to search for and absorb new knowledge and new abilities is increasingly important in all trades
- key qualifications. Similarly, the not directly trade related key qualifications as e.g. critical approach, flexibility, cooperation, communicative skills etc. tend to be increasingly important to a steadily larger number of jobs
- goals, frames for the system overall – securing coherence
- financing arrangements: be it tax-payers exclusively or joint ventures with industry
- quality assurance and, last but not least,
- development of schools and teachers

Time does not allow for a big venture into this important issue. I refer to the Greek Minister of Education, Mr. Arsenis, who stressed the importance of modern teaching methods developed to meet the demands for personal, social and organizational competencies. It is a fact that the moment of truth for all education is the in the meeting between the student and the teacher or trainer. How could we manage to teach these key qualifications to our students if teachers, or even school principals, do not posses them themselves? If learning processes continue to be organized as work was organized in our childhoods many years ago!? That is one important question for public officials to figure out.

The public sector, including its schools and teachers, are not alone in dealing with all the challenges for vocational education. The private sector – the partners of the labour market (organizations) and the private companies – have important roles to play in the development and maintenance of good VET systems.

The private sector must take on prime responsibility for
- forecasts for the labour market
- advice for public authorities in the VET sector and advice for local schools in connection, e.g., with governing boards
- VET specific goals, including the structure of specializations

- complementary training: dual or other sorts of company-based training which is vital not least for the development of key-competencies
- co-financing.

The private sector carries special responsibility for further and retraining of adults, and also for the young; though I do tend to think that the public sector should take the lead concerning education of the young given the double role mentioned earlier.

The key issue is, in my opinion, that public and private sectors have complementary roles to play in VET. The responsibility cannot be said to lie exclusively on one or the other.

National partnerships must be developed where not already in place. Different roles must be discussed and understood by the partners. Respect for the competence of each partner must develop or be maintained.

Those are some of the prerequisites for feeling responsible and taking on joint responsibility, including the important responsibility for financing Vocational Training and Education. As we all know VET is expensive – the initial training of the young as well as further and retraining of adults in a lifelong perspective.

Good VET systems with a view to the future are – or should be – a joint project for public and private interests. And a joint venture as to the financing of it.

With these words, I leave the floor to the first of our speakers in this unit.

6.2 The Role of the Public Sector in Vocational Education and Training Systems
by Mr Ulrich Hillenkamp

Mr Ulrich Hillenkamp is Deputy Director of the European Training Foundation in Turin, Italy

Introduction

The future of Europe and its development will depend on its ability to give people the chance to take responsibility for their own future and personal development throughout life. Vocational education and training (VET), which has for a long time been seen as a "poor relation" of general education, has now emerged as an important element in this process.

The public sector has an important role to play to facilitate the whole learning process. At the same time, it has to be said that the public sector in VET is only one actor among others: for instance, although initial education and training should remain the responsibility of the public sector, we have to realise that today initial education and training no longer represents VET as a whole but is only the entry phase of a multi-stage learning process. This greatly reduces the influence of initial (public) VET, as private institutions/companies are emerging to provide continuous education and training better equipped for certain subjects. However, the public role in VET remains indispensable and it should become even more of a change agent for facilitating learning – the more so as the links and interconnections in modern society become more complex. However, the more that businesses and the labour market demand abilities and knowledge which are mainly acquired in work situations, the more the traditional role of the public sector to guarantee a minimum level of education will become insufficient. Therefore the public sector needs to work with the private sector. Such "networks" may be formal (tripartite system) or informal (cooperation between individual VET establishments and companies).

I am very grateful to be here and to discuss with you the challenges of vocational education and training on the threshold of the 21st century. It gives me great pleasure to be able to address this conference on the subject of the changing role of the public sector in vocational education and training.

I would like to introduce myself briefly: I am deputy director of the European Training Foundation. The Foundation is an agency of the European Union and has worked with about 130 members of staff in Turin, Italy, since 1995. It was established to support and coordinate activities between the EU and partner countries in Central and Eastern Europe, the New Independent States and Mongolia in the field of vocational education and training. At present we cooperate with 26 partner countries, carry out projects, advise and support in other ways these countries on the reform of their VET systems. Our perspective is to work as a centre of expertise, i.e. to contribute to the development of a partner country's potential through a supportive process that empowers them to develop their own expertise. We thus stress the self-development of each country and foresee the setting up of a supportive process (initiation, facilitation, guidance, counselling via ETF as a change agent) to acquire whatever they will need (also for some of them as future members of the EU). Only very recently our field of responsibility was enlarged to the non-EU Mediterranean countries.

Objectives/challenges/changing role

This understanding of a centre of expertise of a public institution like the European Training Foundation may already give you a clue to the modern role of the public sector in VET. But instead of giving a quick answer, let me develop this point by starting with the question: what should be the objective of the public sector? In

the past, we said that only the public sector can provide and guarantee the prerequisites for education; it was the public sector which made education "public" and "individual" and, hence, realized these two basic principals of modern society. This is also true for VET: the public nature has been achieved by bringing vocational education into the school and so transferring responsibility from the guilds and professions to the state. Individualization has become possible by taking training out of the closed social system of the "family business" and tailoring it to labour market requirements.

Education as a public affair that promotes individuality remains a necessary condition for modern societies. But are these principles still sufficient? Let us take as an example the countries we are cooperating with who aim to become members of the EU: the so-called candidate countries. The main objectives of the public sector in these countries have been:

- to promote democratization and
- to support a market-oriented society

on all levels and in all areas of society.

Within the VET system, at least four key elements of educational change can be identified:

- the end of rigid central control and the decentralization of power to regional and local levels
- the increasing shift of responsibilities from the state to the individual, which started with the recognition of the right of students to make educational choices according to their interests and to promote their individual abilities
- the setting-up of a VET system that strengthens the competitiveness of the economy through the competencies and qualifications of their graduates and
- to develop everyone's employability and capacity for economic life.

Although these points have been introduced practically in all candidate countries, it has to be said that most of the VET reforms are being done more in a reactive way and less with pro-active forward thinking. These challenges which need to be met by VET reforms can be identified as:

- the individualization and uncertainty of all aspects of life
- the instability and turbulence of economic life in general and of labour-market developments in particular.

They are first of all challenges for the individuals, as they have to prepare themselves to acquire a reflected knowledge required in the change process. This process continues throughout life, which means that they have to prepare themselves for lifelong learning.

But as well as the individual challenge, the central issue of the public sector is found to be how best to use education and training to enhance this lifelong learning process. And here we can draw on the experience of our Foundation: the new role of the public sector is to initiate, facilitate, guide and counsel this lifelong learning of the individual. It needs to stress the self-development of the individual and foresee the setting up of supportive processes, structures and institutions/change agents which can promote the self-development process throughout life.

The new role also comprises measures for those who are being marginalized in the labour market. The VET system alone cannot offer sufficient solutions to the problem of employability, of unemployment or early leavers created by economic, occupational and social restructuring. All the evidence indicates that the only solution is coherent economic, labour-market, educational and social policy measures.

This definition of the role of the public sector in VET has to be set against a traditional one, which looked at the VET system as a "closed-shop" public sector and stressed the top-down transfer of functional knowledge from experts within specialized institutions during a very limited period of time (the school years). The aim was to educate and train students in skills and knowledge for an entire working life, which is no longer the reality.

Perspectives

In now talking about the future role of the public sector on the threshold of the 21st century, I am aware that my remarks are generalized ones which may have more or less relevance in individual countries. Only when vocational education and training is the context of its respective cultural environment, can it then be developed in line with the needs of individual countries and avoid setbacks and alienation. Therefore, the European Training Foundation doesn't see itself as a promoter of exporting "ready-made" solutions from the European Union to the partner countries. Our role is to support the partner countries to find their own original solutions which correspond to the specific situation of these countries. This approach is in line with the reality that there is no single European VET system, either in initial or in continuing VET. There is also no mandate for the European Union to create such a single European VET system. According to the Treaty of Maastricht, there is the principle of subsidiarity in force, which means that VET is the responsibility of each member state. But nevertheless, the future perspectives for the public sector are, in my view, to a large extent the same for the 15 member states, the candidate countries, and for almost all industrialized nations. However, the means of meeting those perspectives may be different in each country.

We have identified lifelong learning as the key approach for vocational education and training on the threshold of the 21st century; the role of the public sector then should be to reorganize the VET system according to this approach.

To elaborate I would like to present to you four layers or components of the VET system, which at least have to be reformed to make lifelong learning possible. These layers are:

- the system perspective: how can a VET system be made flexible?
- the network perspective: how best can the public sector communicate with the "market"?
- the school/learning centre perspective: how can schools be turned into learning organizations?
- the student (and teacher) perspective: what needs to be learnt and how?

When looking at the agenda of this conference you will see that we are asked to deal with the policy and organizational matters of VET reforms. I will therefore mainly concentrate on the first two of my layers bearing in mind, however, that the last two are equally important and indispensable for the integration of lifelong learning into VET.

The system perspective: how can a VET system be made flexible?

A systemic approach is needed which builds links both horizontally and vertically. The vertical, for example: between secondary VET and neighbouring educational levels, types and sectors (primary, post-secondary, continuing and university) with a view to bringing the separate reform initiatives into a coherent and comprehensive whole. The key is to develop a coherent policy between initial and continuing VET (including informal learning).

As regards the partner countries, a quick look at progress up to now will demonstrate the challenges that face the VET system in terms of lifelong learning.

As a generality, the initial period of transition involved "saving" the educational system (and especially the vocational part) from total collapse following the breakdown of the state-dominated enterprises. The responsible ministries have certainly been successful in doing that rescue job. However, at this point, it is impossible to say whether this initial emergency policy has also allowed for sufficient future-oriented modernization and reform.

At the end of the 1990s, VET policy makers are being confronted with the results of the initial reform measures and with the need to include educational areas that have so far been neglected. Among the latter, I include continuing training. As I already have said, the public sector has to ensure a coherent policy between initial and continuing VET. That means, for example, that it has to develop the framework, instruments and means for the functioning of both initial and continuing VET. But the overall challenge will be to develop a system-oriented approach to VET instead of the sector orientation that has dominated so far. Awareness of this has grown both as a result of the experienced limitations of the sector approach and because of the discussions about lifelong learning. A thorough reform of VET, for example, remains impossible as long as the quality of elementary schooling does not improve. If this does not happen, then the so-called specialized vocational schools will always have a partly remedial character. Similarly, a real opening up of tertiary education is not realistic as long as tertiary education remains characterized by fragmented academically-oriented institutions and no serious alternative for graduates of secondary vocational schools are made available. In that case vocational education and training as a whole will remain a second-rate choice.

The network perspective: how best can the public sector communicate with the "market"?

The need for a network approach to VET is clear. What is interesting is that the potential members of the network are relatively independent and may even compete with each other or pursue different and conflicting objectives. However, they have some common needs and interests and, at some point in time, came to the conclusion that it may be useful "to network".

All EU member countries have accepted the crucial importance of learning throughout life to enrich personal lives, foster economic growth and maintain social cohesion, and have agreed on strategies to implement it. Such strategies have to include promoting coherent links between the public and private sectors, and by building bridges that will facilitate joint decision-making based on labour-market needs, types of qualifications and flexible movement between education/training and work.

Only when the public and private sectors work together can they develop a VET system that strengthens both the competitiveness of the economy and the student's employability and capacity to cope with changing requirements. This cooperation poses a challenge for both sides:

- from the public sector's perspective: accepting the private sector as a generator for experience based lifelong learning
- from the perspective of the private sector: to share responsibility for the future reform of VET and to open VET policy development to the world of work.

To cope with these challenges, the public sector needs to network with the private sector on at least two levels:

- on policy, with social partners as important stakeholders in VET and
- on administrative matters level to ensure that schools/training centres network with their local employers to involve companies in the training of students.

Involvement of social partners

In most of our partner countries, the social dialogue started and was consolidated in an unfavourable environment (economic crisis, growing unemployment, administrative reforms). Significant steps have been made towards the establishment of a democratic system of industrial relations (pluralistic representation of interests, development of a collective bargaining framework, etc.). At the same time, there is a lack of (or weak level of) employee representation in the emerging private sector. This is particularly the case within SMEs and companies with high levels of foreign investment. However, we see a strong presence of trade unions in companies which are under state control (in which there is often a lack of clear differentiation between the roles and interests of the two sides: employers and workers).

The urgency for reform at the same time as unions and employers had to establish themselves according to new socio-economic conditions did not create the most suitable context for their involvement in education issues, which generally imply a long and time-consuming exercise. Social dialogue on vocational training issues remains very diverse, reflecting the different socio-economic, political and cultural background and tradition in each country. Whereas a number of countries still lack a clear institutional framework allowing for the participation of social partners in VET, there is an observable trend showing a growing preference for tripartite structures at national level to deal with vocational education and training issues. The competence of these tripartite structures is usually a consultative one but in some exceptional cases can be extended to participation in decision-making.

The status and the role of social partners in relation to vocational training at the enterprise level varies as to the type of ownership. In companies or branches of industry which are part of the public sector, they are playing a leading role in making decisions regarding vocational training at the enterprise level.

While in various countries, employers' and employees' organizations show a growing interest in adopting a more pro-active attitude with regard to VET issues, in general, they lack the adequate experience and expertise in training matters. However, their inclusion in the design and implementation of reform (decision-making, evaluation of output, involvement in examination boards, etc.) is not only helpful by extending ownership of the necessary measures, but may also be seen as a learning opportunity for social partner representatives.

As a challenge, there remains a strong need for the development of skills and a specific dialogue culture in social partner organizations and public administration which is often still lacking in the partner countries. Finally, the existence of adequate reporting mechanisms for observing and analysing the social dialogue would increase the visibility and the awareness about the added value of these practices for VET reform.

In general, the countries become increasingly aware of the major positive aspect of social dialogue. There is an increasing awareness both from the side of the public and the private sector that social partners should be involved in the development of overall and future-oriented human resource policies. A question mark can be put on their present resources and expertise: will social partners, in the short run, be able to relate their collective bargaining strategies to the human resource development debate?

Coherent links between learning and work

In the Central and Eastern European countries, to refer again to our clients, the topic of integration of work and learning is burdened by history. Most partner countries had implemented a special version of integration of work and learning: a seemingly dual system where the vocational school, however, was part of a state-owned company. The school did not fulfil a social mandate for education and represented no counterweight to the work in the state-run companies strictly organized along Fordist lines. The school was the agent of the company helping to train a workforce according to its organizational needs. It is not surprising that today's vocational schools burdened with this past find it difficult to be considered as valid an educational institution as the general school which was spared this fate. At the same time this experience discredited the idea of integrating work and learning because companies used it only to train skills for narrowly defined jobs. Nevertheless, some work experience and learning-by-doing took place, but for a different reason. Because of the permanent lack of parts and the relatively low technology level of the products, the workers always had the opportunity to search for ad-hoc solutions to specific production problems.

Having this burden in mind, we should not expect that networking on regional and local level will bring immediate success. The approach would rather be to organise, as a first step, informal personal rapports

between the teachers and the business managers. The purpose is to reduce mutual prejudice and to develop common interests for eventual cooperation. The next step would be to create structures within which cooperation can develop. This could be round tables, committees and task-forces which could form a forum for establishing contacts between school and business and for working out concrete cooperation steps.

But common work based on personal efforts and relations is not sufficient for long-term effective cooperation in educational politics. In order to reach this objective it is better to set up local or regional institutions or to use those already in existence whose task it would be to systematically develop cooperation between school and company. These institutions would have a role in supporting and advising those interested within the schools and companies. It is important that these institutions realise the intention of the cooperation effort and bear in mind the interests of all those involved. In addition they should not only seek contact with other institutions such as universities, continuous education institutions, technology centres, chambers of commerce, but also with members of the professions, and use them to pursue their objectives systematically. They could provide a platform for workshops and seminars in which the participants together develop new forms of cooperation.

In the long term, the most forceful way to support the integration of work and learning in VET is a vocational education law that defines business and school as equivalent and interdependent places of learning. Experience shows that such a law remains ineffective until the following important cultural, institutional and market-strategic preconditions are fulfilled.

- In social terms a work culture respecting the value of practical professional work at blue-collar level is required.
- The determined will of all participants – employers, employees, vocational schools and state institutions – that the implementation of such law is needed.
- The country's economy should not be predominantly based on low-priced products and services. Only in a varied economy can the companies offer sufficiently complex work situations which are necessary for acquiring individual ability to act.
- The work organization in the companies should warrant that the employees at operational level have room for decision-making so that they can solve wider problems autonomously.

However, no law can guarantee day-to-day cooperation of the public and private partners at the place of learning. The trend for these entities to partition off can only be overcome by a process of active cooperation supported by public and private initiatives.

In conclusion, I would like to emphasise that the development of cooperation between the public and the private sector (regardless of which form it takes in the particular case) always has to be a permanent process which does not normally lead to a pre-defined and precisely predictable result. It is a learning process for all participants during which mistakes will be made and setbacks must be expected. The forms and contents of cooperation will be very different according to the circumstances and the interest of the cooperation partners. Nobody should assume that there is a panacea for achieving good cooperation between the public and the private sectors.

6.3 The Complementarity of the Public and the Private Sector *by Mr András Benedek*

Mr András Benedek is Deputy State Secretary at the Ministry of Education in Hungary

On the threshold of the 21st century, a new symbiosis is evolving in education between what were at one time well-separated public and private sectors. Those involved in the public sphere, first and foremost the citizen, whether child or adult, is facing up to the fact that both the entry into the labour market and the position that can be secured there require vocational training. Those partly traditional institutions, such as schools and vocational education and training institutions which provided basic and special education, are being forced into major transformations. Society's training demands are growing, and with them the criticisms that public vocational training institutions do not take sufficient account of the economy, the labour market and the private sector. The target of criticism is, naturally, often the state and government administration, whether it is central, regional or local.

The main actors in the private sector have also emerged. Employers and employees are both citizens and have certain fundamental differences of interest. These interests are usually pursued in the context of the corporate organization at the place of work and, on a wider scale, in the context of the labour market. The effectiveness of capital, corporate success, and profitability are also aspects which are unique to the private sector.

As the turn of the millennium approaches, countries building up market-based economies and the people most closely involved with the development of vocational education and training have to set out their interests very clearly. These are:

- *Responsibility towards citizens.* This would appear to be equivalent to the principle of state responsibility in providing education and assisting employment. But it also embraces the responsibility of families and communities. And this interest is

present within companies too, although there it is naturally linked to other prominent interests.
- *To be successful*. True for both individuals and organizations, and an even harmonization of the two is the recipe for balanced development.
- *To be competitive*. An interest which has come to the forefront recently, bringing with it the concepts of "winner" and "loser", with the conflicts these imply.
- *Profitability*. This is a consideration particular to businesses and can change in the short or long term but, at any time, dictates fundamental interests.

The question arises as to where the interaction between public and private sector will manifest itself in the case of vocational training. There are four points of contact which have become important in the course of the transformations in the 1990's and which point to the likely changes at the start of the 21st century.
- Of central importance now and in the future is *employment*, where the balance of supply and demand takes place largely on market terms. The close relationship between vocational education and training and employment has come to the forefront particularly in the last ten years and can be expected to remain there in the coming years.
- The second is *legislation*, of which, over the last ten years, there has been much dealing with the status of vocational education and training, the qualification systems, quality assurance, and with setting the legal framework of cooperation emerging between the economy and the state.
- *Finance* of vocational education and training is a graphic illustration of changes in the first two factors and has in many cases been the main consideration in legislation. In this respect, the differentiating role of the market economy in vocational training and the associated obligations and incentives have been evolving at a rising pace.
- Especially important for interactive effects is *communication* which is capable of developing harmonization of interests and relations between those involved in vocational education and training. Recognising problems, analysing alternative solutions, and preparing for decisions call for communication by which representatives of both the public and the private sectors are able to resolve their interests. The institution of social partnership has, especially in recent years, boosted vocational education and training's developments and brought it social recognition both within the European Union and within my country.

Having presented the relationships in principle, I would now like to turn to the actual transformation in the interaction between public and private sectors which has occurred via the reform of Hungarian vocational training.

As the 21st century draws near, the acceleration of the pace of change is perceptible in Hungary and throughout the world. Time is indeed speeding up. Firstly there is the phenomenon of *globalization*, whereby new telecommunication systems have enabled information to become accessible at the moment it is generated. Secondly, the world is addressing this challenge through wider and deeper integration. This is also perceptible in the world of work, and change is speeding up, particularly in vocational education and training, so that training for change will be one of the main tasks of the future.

In Hungary's case, social and economic change have been getting faster since 1990. Pluralism has changed the country's government and administration, and *Euro-Atlantic orientation* has given developments a definite direction. At an everyday level, life has been most affected by the positively and negatively perceived effects of privatization.

Hungary is one of the Central-East Europe's most dynamically progressing countries as regards the establishment of a market economy. In the 1990's, the reform of vocational education and training has become a clear priority in this process. The main stages in vocational training reform have been:

New legislative framework
- In 1993, the Hungarian legislature passed the country's first dedicated *Vocational Training Act*.
- Vocational training contribution is now prescribed by law (companies are obliged to spend 1.5% of their annual wage bill on training)
- A new *vocational training standard and qualification system* to meet market economy requirements has been put in place through the cooperation of social partners.

Major international projects were launched with EU support (PHARE, LEONARDO, ETF). World Bank loans enabled a human resources programme to be started up centred on vocational training. Bilateral cooperation gave rise to student and teacher exchanges, programme development and modernization of infrastructure.

- *Institutional reform* got under way, under which vocational training's labour-market relations were strengthened. The drawing-up of training programmes was decentralized and private sector representatives (employers and economic chambers) were allowed more direct participation in vocational training quality assurance.

Social partners were endowed with an enhanced role in the vocational education and training reform process. A major condition for success is continuous and institutionalized communication among employers,

employees and government. This provides stability in vocational education and training's development, develops mutual understanding, and contributes to peace in the world of work. This communication assists in the division of tasks when aims are being identified and alternative routes to attain them are being appraised. The other important role of social partnership is its ability to handle conflicts which arise in the course of developments and to alleviate tensions which are the inevitable concomitants of development.

In Hungary, social partnership is emerging partly in the process of European integration and partly in the construction of the market economy. In future, several issues of international-level representation will have to be addressed, such as the participation of social partners in the EU Vocational Training Commission and its institutions. Already established on a firm basis are:

- At *national* level: the National Vocational Training Council (1991), in which representatives of employees, employers, and the government are joined by representatives of the economic chambers and the local authorities which run vocational training colleges.
- At *regional* level: the supervisory councils of labour resources development centres (1992) which primarily transmit labour resource demands to vocational education and training.
- At *county* level: the County Vocational Training Committees which arrange the distribution of decentralized development funds, supervise their use and are involved in the inspection of practical training.

A further task in the process of establishing a market economy, especially among larger companies, is the strengthening of social partnership and drawing up local vocational education and training policies. These are tasks which are still ahead of us, and are challenges to both employers and employees.

Conclusions

- The development of the interaction between public and private sectors is a central aspect of vocational education and training reform.
- As well as identities of interest between the two sectors, there are significant differences between them.
- Interests are pursued primarily as part of employment practice, but legal-financial regulation and communication between partners are also essential.
- Social dialogue and partnership are factors which contribute to stable development and to the success of the reform process.

6.4 Financing Issues of Vocational Education and Training
by Mr Nikolai Petrov

Mr Nikolai Petrov is Chief of the Technical Cooperation Team in Employment and Training at the International Labour Office (ILO) in Geneva

Due to growing economic and financial difficulties in Europe from west to east and from north to south, paying for the rather high costs of vocational education and training (VET) has become a real problem for many governments, employers and individual citizens.

Governments are more and more inclined to cut direct budget allocations for training and to transfer an increasing part of the funding to local authorities.

Employers, under conditions of slow growth (if any) and record high levels of unemployment, often prefer to hire skilled workers directly from the labour market rather than to spend money and time in upgrading their own employees.

Individuals, young and not so young, when their incomes are going down, are less inclined to spend their own savings or to borrow from government and family for further education and skills development.

Under the circumstances, the question "who should pay for VET and how to make training more cost-effective?" sounds very appropriate. This was (and still is) the question most often addressed to myself and my colleagues from the ILO when we are providing advisory services in the vocational training field to Member States.

To enable ourselves to provide the ILO constituencies (which include governments, employers' and workers' organizations) with comprehensive information on different approaches to VET financing, we undertook recently a comparative analysis of existing practices in a considerable number of countries.

In my short presentation, I will try to share with you some observations and conclusions from this study.

The first observation: co-financing of VET by governments, employers and trainees is increasingly necessary.

Public funding is justified when the social benefits of VET are broad enough and effect large groups of the population. Social priorities can be established and used to guide VET budgeting. Improved productivity and employment promotion are usually regarded as the most important priorities. Thus, public financing of training is justified as long as trained people can find jobs or be gainfully self-employed. Creation of equal opportunities for individual development (especially for disadvantaged groups) generate important social

benefits and, in this respect, the government role in providing equal access to VET is unique.

Government budgets have been and will be the major source of VET financing, but since *education and training generate private benefits for trainees and employers* they also should contribute to the cost sharing of VET.

Individuals are usually co-financing training through
- fees paid to VET providers
- acceptance of reduced wages during training periods
- training after working hours
- repayment of training loans

Employers, in their turn, may
- directly finance training of their employees
- subsidise employees' private training
- co-finance the employees' paid educational leave
- contribute to national/local payroll-based training tax

The second observation: there are three basic approaches to public financing.

- *The first approach views VET funding as traditional budgeting and funds disbursement.* Certain standard costs for financing training institutions (such as wages, operational and maintenance costs) are established, and financial resources are transferred to those institutions annually irrespective of programming, enrolments and other outputs. In this case, funding functions are routinely performed by accounting offices of ministries as agencies in charge of VET. The amounts of budgeted money determine the type of training offered and the training capacity.
- *The second approach: views financing as a management instrument.* Under this approach, financing schemes aim at cutting training costs and directing training providers towards meeting certain priorities and outputs (e.g. number of graduates, their level of achievement, job placement, etc.) Such funding arrangements incorporate mechanisms for measuring performance towards established outputs/outcomes.
- *The third approach views VET financing as an investment.* This approach emphasises cost-benefit ratios: social and private rates of return to educational and training investments. Rate-of-return analysis can measure the comparative cost-efficiency of educational and training investments for alternative organizational or programming options. For instance, individual training programmes may be compared allowing allocation of resources to courses that feature higher cost effectiveness and economic returns.

The third observation: there are two major types of resource allocation formulas: normative and performance-based.

- The *normative* approach assumes that each training institution consists of a certain number of teaching and administrative staff and their wage-related expenses should be covered together with operational and maintenance costs. Certain rations, such as the number of students per teacher, may also be established for budgeting purposes.
  This model, which is normally based on standard decisions and uses a standard-cost principle, is simple and often easy to implement. However, central decision and funding schemes, by their nature, constrain school initiative, lack operational flexibility, and fail to respond to regional and local circumstances.
- Under *performance-based mechanism*, no public funding is guaranteed to training providers unless they demonstrate an identified level of performance and output. Training institutions find themselves operating almost under a market situation when they compete for students' enrolment and should achieve better results in order to earn their funds.
  In such a model, the government becomes a major purchaser rather than a major direct provider of VET services.

The fourth observation: decentralization of VET budgets to local authorities is the most common response to growing difficulties of VET financing by central authorities.

Through the redistribution of general revenues, local governments are made responsible for more efficient use of the state educational resources. In some countries, central government provides only wage-related funds while local authorities are responsible for covering the cost of school maintenance and operational expenditures.

The principal deficiency of decentralized funding schemes arises from the disparities in wealth between regions. If there is no special correction mechanism, some regions may be unable to adequately fund their VET institutions. In addition, if local authorities cannot raise sufficient funds or do not have a firm interest in VET, then the change from central to multi-level funding may result in a massive decline in funding.

The wider resource base of multi-level funding certainly has an advantage over a single-source system, as the failure of one financial source may be compensated by others. However, the comparative solvency of public budgets at each level and their interest in funding VET can vary. Multi-level funding involves a larger number of decision-makers which may result in delays and distortion of funding decisions.

Central funding mechanisms may have the advantage of being more straightforward and secure, but VET systems in such circumstance tend to lose their flexibility and undermine the outcome.

Decentralized funding schemes tend to be more complicated in the implementation and may generate regional disparities. But, since local governments are more flexible and accountable to the local public, they are more prepared to yield a better performance from training institutions and achieve greater cost-efficiency of fund allocations.

The majority of the labour force have undertaken training beyond the vocational education structure either on-the-job (enterprise-based training) or out-of-job (labour-market training). Those two types of training have their own funding sources and financing schemes.

The *principal arrangements for government involvement in enterprise-based training* vary from the non-interference of the state to strict regulations imposed on levels of enterprise training expenditure.

To *stimulate on-the-job training*, the following instruments may be used:

- the government can offer direct financial incentives in the form of reimbursed training expenditures or grants (Germany, United Kingdom);
- the government can legally introduce compulsory training schemes (e.g. Belgium, Denmark, France, Ireland);
- employers and unions can set up training development funds under the training clauses of collective labour agreements (e.g. Belgium, Denmark, the Netherlands);
- government and industry may agree to co-finance the paid educational leave of employees (e.g. Belgium, France).

Many governments introduced *compulsory financing schemes*, which are most often based on training taxes (levies). Through compulsory schemes, governments attempt to raise the level of training beyond that which is provided through the interplay of free labour-market forces and to encourage an implementation of a life-long learning concept.

The major advantage of levy-based schemes is their ability to raise national VET funds or to secure a certain measure of enterprise training through self-financing. To a certain extent, such schemes also allow the supervision of the content and quality of training offered by employers.

On the other hand, *serious constraints* have also become apparent:

- many firms tend to implement programmes that accomplish little beyond meeting the compulsory training level and do not bring about any real change;
- many smaller firms pay levies but fail to participate, thus losing the money;
- need for training and training costs vary among industries, levy rates that do not reflect these differences seem counter productive;
- training levies tend to increase the cost of labour to enterprises, which may affect employment adversely.

Most governments' *incentive schemes* impose rather strict conditions for eligibility including training content, course duration, unit costs and even the age of trainees. Such conditions are a management tool in the government's hands and cannot be avoided. However, if the right balance is not found, incentive schemes will prove ineffective.

Our analysis show that the *basic preconditions for levy schemes viability* should include the following elements:

- sufficient number of levy-paying enterprises
- solid tax-collecting mechanisms
- government-employer cooperation
- administration of levy schemes should fully involve social partners' organizations
- alternative levy-based schemes for different types of enterprises

Creation of territorial and sectoral training funds in some European countries (e.g. Denmark, Switzerland, the Netherlands) should be mentioned as good examples of a practical cooperation in VET between government and social partners. Those funds are financed by employers' and, sometimes, by employees' contributions, and also receive state allocations.

Funds are usually set up under sectoral collective labour agreements and administered by bipartite boards. They finance the development of sectoral training policies and curriculum, rather than conducting training. The major part of the funds' budgets may come from special levies, with the rest made up of government subsidies. Training itself usually remains the employer's responsibility.

Unlike vocational education and enterprise-based training, *labour-market training* relies on employment funds established mostly within the employment promotion programmes and also relies on tuition fees paid directly by individual trainees. In certain countries, employment insurance funds are national and compulsory, and involve taxes which are earmarked for training (e.g. Japan). In other countries, they are voluntary, and only participating enterprises and workers are entitled to benefits involving training grants or reimbursement of their training expenditures (e.g. Denmark, Sweden). In certain countries, the employment insurance system and the government-funded unemployment assistance system were combined and used to finance a broad range of services

including training (e.g. France, Finland, The Netherlands).

National labour-market funds are commonly administered by labour ministries. The compulsory employment insurance funds are managed by a national social-security administration. While voluntary assurance funds are usually managed by bipartite employer-labour bodies. Training money from those funds can be allocated either to a national labour-market training agency (e.g. AFPA in France, AMU in Denmark) or to other administrating agencies. These bodies contract courses to public and private training providers. Various incentives for training providers have been developed to make them more responsive to labour-market demands and to secure job placement of trainees.

Some governments, instead of administering and financing labour-market training directly, rely on intermediate managerial organizations which, in most cases, were created by government decision as semi-independent cost-covering agencies. For instance, in the United Kingdom, labour-market training is guided by the Department of Labour and Education but operationally administered and funded by 82 Training and Enterprise Councils (TECs). The TECs task is to contract with, supervise and monitor training providers which carry out publicly-funded training schemes. Money-wise, the TEC-based organization and funding of labour-market training is perhaps a less expensive option than financing a national training agency.

In some countries, the training initiative of adults is encouraged through government-backed training loans. The cost of this undertaking to the government lies in the interest-free period which make these loans attractive to the trainees. This type of public investment was found more cost-efficient than the public expenditure on direct training provision.

The last important observation: financial mechanisms for securing equal opportunities in VET.

International experience shows that the following financial instruments could be selectively used to provide *equal opportunities in obtaining initial vocational education and training*:

- free readily-available access to anyone willing to acquire education and basic skills in public VET institutions located throughout the country;
- training vouchers which entitle young people to education and training services for a publicly-guaranteed amount of money;
- selective financing of fellowships for individuals with low incomes who otherwise have no access to training.

In continuing training, equity in access to training can be achieved through:

- government-guaranteed training loans to individual trainees;
- promotion of paid leave for continuing education and training that is co-financed by government and industry;
- promotion of collective agreements that guarantee employees' rights to a specified number of training hours per year;
- training voucher or training accounts which entitle adults to education and training services for a publicly-guaranteed amount of money.

Public VET budgets would hardly be sufficient to satisfy the ever-growing demand for equitable education and training. Therefore, in this area, priorities may be established regarding publicly-funded VET programmes for special population target groups.

Finally, some *general conclusions*:

- Co-financing of VET by all interested parties (government, employers, and trainees) is a fundamental principal.
- The government bears the major responsibility for VET organization in the country and plays the major role in financing initial training for youth, retraining of the unemployed, and skills development for disadvantaged population groups.
- Employers provide most funding for on-the-job training.
- Individuals contribute financially to their lifelong education and skills development.
- The government should use VET financing as a managerial tool by mobilising resources from taxpayers, employers and trainees and channelling these resources through training providers with performance-based criteria.

7 Internationalization of Economic Activities and Tourism

7.1 Introduction
by Mr Steven Freudmann

Mr Steven Freudmann is President of the Association of British Travel Agents (ABTA), United Kingdom of Great Britain and Northern Ireland

- In Europe, and indeed much of the world, one of the fastest growing economic sectors – whether for inbound or outbound travel on leisure or business – is travel and tourism.
- In the UK, visitor numbers grow each year and the ability to manage the way in which this growth is

handled, and the visitor's needs are fulfilled, requires increasing professionalism.

- Some current themes in the UK are:
  - An even greater focus on customer service.
  - Ensuring a more even spread of tourism to all parts of the nation by appropriate marketing.
  - The increasing role of technology as both information source and means of supplying a time-efficient service.
  - The need to enhance the idea of professionalism of the workforce by training and qualifications which emphasise customer-care aspects.
  - The need to compete for customers against other economic sectors which often offer more financial rewards.
  - The need for more flexibility in the recruitment and deployment of staff in an era where more people are undertaking higher education.
  - The need for professional mobility, including continuous professional development (CPD).
  - Training as a vital element of CPD within an increasingly frenetic and complex environment which is connected to business objectives.
- Fortunately the UK's Travel Industry has had a well-defined qualifications structure for many years with progression between stages; also true for many aspects of the hospitality sector. However, this has not been universal across the tourism sector with many activities not properly structured in qualification terms.
- Nor has aspiration always been translated into action in training. For example, in a survey conducted three years ago by our subsidiary, the Travel Training Company, although 70% of travel agents viewed training as essential, only 28% in practice conducted it systematically.
- Another characteristic of the tourism sector has been the concentration of much of the training and qualifications at operative level with little attention to the needs of managers, especially within small companies which make up the majority in travel.
- There has been a fundamental change in the UK's vocational education structure with the introduction of qualifications based on ability to do the job to a national occupational standard. This has necessitated a complete change in thinking and has been taken up slowly rather than immediately.
- Now, however, we are moving forward in marrying together what was best in the previous system in our industry with the new competence-based qualifications with their emphasis on assessing performance in the workplace wherever practicable.
- Another government initiative in reinforcing the need to harness professionalism to improve business performance has been the introduction of the "Investors in People" quality accolade for companies and other organizations. This plays a similar role for a company's staff that ISO 9000 does for its procedures. It is about such things as defining the skill requirements of a business, matching the workforce against these, closing the gap by training and development in a planned manner to meet the business objectives translated into team and individual objectives, and communicating effectively at all levels.
- The UK has found the way forward and is increasingly fielding enthusiastic enquiries from abroad in competence-based qualifications which empower individuals to give quality customer service so providing their companies with the competitive edge.
- Emerging economies in particular are keen to improve the education and training of the workforce and tourism is often seen as the key to their economic future. In a number of Gulf States, for example, up to 50% of the population is under the age of 16. With finite supplies of the oil that has underpinned many economies, tourism is seen as a way of replacing foreign currency flows on the one hand and providing jobs for a burgeoning population on the other.
- In South Africa, the impact of tourism may depend on the ability of the government to control crime and maintain political stability. If this is achieved, then the country has endless opportunities to enhance its already thriving tourism economy, and European countries will benefit from increasing numbers of incoming South Africans as the "middle class" develops. But education and literacy standards among the black population are poor and, if the benefits of international tourism are to reach the majority of the population, education and tourism training programmes will be the key.
- Professionalism of the workforce is urgently required throughout the UK's tourism sector and the measures described are helping us along this road. We have much to achieve, but equally we have already come quite a long way.

7.2 Internationalization and Professional Mobility in Tourism *by Ms Helga Foster*

Dr Helga Foster is a Senior Researcher at the Federal Institute for Vocational Training (BIBB), Berlin, Germany

While the economy, the market and politics become more and more global, human resource development remains a very national, sometimes regional affair. All over the world the call has been sent out to be competitive on the new global market, to enter the technological highways for fast communication and to submit to the new requests and rules of globalization.

But what is or means "global" other than the worldwide flow of capital and the interdependence of stock-market movements? How much does globalization really has to do with the majority of the people who live and work wherever they were born, and who are personally, economically and culturally committed to their national, regional or just local environment and

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heritage. If this is true – and many facts speak for it – will then globalization just challenge or benefit a few highly professional managers and specialists on their never-ending jet-hopping between countries and continents?

But we have experienced and are still facing other dimensions of international movements on different levels as well. While experts, specialists and professionals prove mobility, unskilled or outskilled workers do so as well. Millions of people around the globe, often unskilled or semi-skilled, physically move along the highways, following a track of work and income. Speaking of globalization, this phenomenon has to be considered as the other side of the same coin.

I mention this other dimension of today's internationalism and sign of individual mobility for two reasons: speaking about tourism in this context, we shall not just reach to the stars of high proficiency and elaborate competencies, but refer to the average worker in the industry or even to the average actor in this field. Tourism today has a lot to do with the revitalization of communities and regions, with the redevelopment of dying infrastructures and considerations of perspectives for employment. This broad orientation in mind, it is especially important to put emphasis on education and training, and on international acknowledgement.

To analyse tourism, there are several approaches to do so: there are statistics about transportation, about inflow and outflow of money spent on travel, on hotel beds occupied during a given time, on visitors, guests and customers for each season. Moreover, there are figures about the workforce engaged in tourism and about products and services assigned to the tourist industry. These existing statistics leave open where and how tourism should develop.

The sometimes "murderous" competition between companies on this specific market leaves the debate to questions of quantitative growth, often disregarding local actors receiving tourists; the quality of the product and, last but not least, safety, ecological and other standards. Though assumptions about the development of tourism are positive and the industry is hoping to expand by opening up new markets, winning new customers and creating new products, the question of skills and qualifications of the workforce are mostly answered traditionally and conventionally, thereby disregarding a growing number of new actors on both sides of the industry.

"Provoked" by the global market, substantiated by professionals travelling around the globe, different arrangements and contents are expected. For vocational education and training these different levels have to be taken into account. Each of the different dimensions, however, should not be considered a closed system but part of a situation that has to be flexible for innovations.

Local and regional dimensions

Many regions in today's fast changing world have lost their former, often mono-structured economic basis. Whatever the reasons were or are for the closing of major production or agrarian sites, they are mostly followed by major cutbacks in the regional or local provision of work, sometimes with the outcome mentioned earlier where people have to leave home to find alternatives for their livelihood.

Though some of these regions or communities tend to overestimate their chances to resurrect importance for investors and new industries, for some of them tourism becomes the "last straw" to cling on to, often disregarding the quality necessary to be attractive to potential customers. Nevertheless, in today's Germany and in several other Western and Eastern European countries, tourism is regarded as one of the important means to regain economic stability. Often those communities and regions do not enjoy any of the typical touristic attractions like sunshine, a spectacular landscape, hot springs, lakes or historic sites. However, it cannot be ignored that the development of tourism stimulates the growth of other branches of the economy too, such as transport, communication, trade, crafts, agriculture, building, production of consumer goods and, last but not least, helps to build up the regional infrastructure. Where tourism is located, there is a vast and complex network of businesses engaged in the lodging, transportation, feeding and entertainment of the traveller. While some are regional or even only communal, many are national, and a growing number are even operating internationally.

The growth in leisure time is making tourism more of a priority than a luxury. Changes in population structure and increasing globalization of politics and industries are asking for a new approach aimed at improving the education and vocational training of the workforce in this sector, enhancing its image and awareness of its economic value, and emphasising the importance of quality service for new and different target groups.

Few industries have as pervasive an impact on the global community as travel and tourism. It is the world's largest industry and one of the fastest growing in Europe and some other countries. 8.5% of the total European workforce are employed in this industry. Its contribution to the economic growth is enormous whether measured in terms of total sales, value added, capital investment, tax contributions, or employment. Nevertheless, the European travel and tourism industry

is faced with a number of critical human resource issues[3]:

- the industry is divided into several sub-sectors by type of activity and therefore type of occupation;
- exacerbated by the industry's long and often unsociable working hours and low pay, the image of the occupations is often of low prestige;
- high staff turnover within the industry not only lowers individual career potential but also the acceptance and reliance of the traveller.

The need to raise standards of education and training has become evident from criticism from tourist practitioners voicing concern at the industry's failure to meet modern needs. My own investigations into the tasks of development produced varying results. Competing interests, e.g. between large and small firms and private and public institutions, turn such matters into political issues. Yet the industry has not gained the attention from the policymakers that its economic contribution merits. Not only does this make it difficult to attract suitable staff to the industry, but also labour policies have traditionally been more concerned with the administration of the workforce than with its development. As a result, there is a growing shortage of skilled labour in all sectors of tourism while education and training systems are often ill-adapted to the industry's needs.

Speaking about internationalization and professional mobility as a new and important trend in and for tourism, these challenges call for attention to be paid to human resource development in general and to training in particular.

Human Resource Development

In my own research I have identified three major areas of skills unconditionally necessary for the specific task of serving the professional traveller:

- foreign language skills
- computer skills
- customer service skills.

But there is more to vocational training than developing these three most crucial competencies for doing a good job. To allow for career prospects, training should be more systematically linked to different performances on the job.

Furthermore, travellers become much more conscious of the environment and are searching increasingly for unspoiled and unpolluted destinations. Their desire for improved quality – not only in the tourist product but also in customer service – will put greater pressure on the tourism workforce and intensify competition within the industry.

Not for leisure but for work: the case of the professional traveller

The professional who is travelling in the context of his or her job mainly does this to:

- attend a conference
- visit a trade fair or some other event
- attend a meeting of his or her own company, or on invitation, at another company
- represent his/her own country within the framework of political cooperation
- work for a given length of time in a distant area in his/her homeland, or in a foreign country.

Travel as a professional is mere work. Most of the luggage contains paper and material, the schedules are fixed according to the task and often, or even most of the time, the travel is prearranged by the authorizing company or institution. Lucky the professional who, at his destination, meets a host who takes care of supplementary arrangements for the after "official hours" time.

While the "normal" tourist generally books far in advance and has time to prepare for the holiday, the professional travellers often are busy in preparing their tasks instead of the tourist aspect of their travel. The destination rarely is one by choice but rather by circumstance.

Therefore, professionally-motivated travel brings people also to less attractive regions and towns and/or to climate zones prohibiting many of the activities assigned to the leisure part of travelling.

Generally, professional travellers speak a second language. Nevertheless, apart from the work activities, this might not be of major help in a country with a third language.

Finally, there are more and more female professionals who experience even additional problems, starting with being assigned to a less comfortable hotel room and ending with self-restrictions about spending their off-time after work outside the hotel room. Special considerations on sophisticated arrangements for women who travel alone for professional reasons seem to be even less relevant to the industry than for their male counterparts.

General training issues

It is often indicated that special target groups are rather a topic within a set of training contents. Provided a training concept or curriculum exists, the professional traveller as a target group generally doesn't receive special attention. This reflects, again, the situation in

3 European Institute of Education and Social Policy: Education for careers in European Travel and Tourism, 1991 American Express Foundation

the industry which doesn't consider the specific necessities/requirements of people who travel for professional reasons.

Though the value added to the industry by business travel is considerable, industry seems to be complacent when being able to have companies and public organizations/institutions under contract as customers. But competition will extend to other questions of good service.

As is well known, there are many tourism and hotel schools that have always produced highly-qualified personnel, but small to medium-sized tourist ventures, the enterprises that form the backbone of the industry, are failing to take advantage of the growth potential offered by vocational training. A study comparing productivity in German and British hotels proved in terms of productivity that the German hotels were almost twice as high in productivity than the British. (Germany: 4.01 guest-nights per employee; Britain: 2.06)[4]. Differences in productivity were largely due to the fact that the German hotels' staff received more and better training.

Is productivity one viewpoint for the industry to become or remain competitive? It doesn't depend on productivity alone but on the product and service itself. The comparative study named above would teach us that vocational education is the highway to success for the individual as well as for tourism. While most of the more "classic" occupations enjoy some type of training, this is not true about many of the occupations covering new requirements. Ranging from the highly professional and very stringent requirements such as pilots, train and bus drivers, to service skills, both general and technical, tourism covers a wide array of skills. While technical requirements are taught in schools and/or through job training, service requirements are often neglected or considered a competency embedded in the personality of the staff. While the tourist industry strives for new customers and engages in product development, education and training for new tasks seem somehow neglected, especially questions arising in connection with the service obligations of competitive tourism.

Service and internationalization

Economic success in terms of growth depend much on work organization, management efficiency and motivation in the workforce. The competitive edge in the world market cannot be maintained by educating a small, highly-qualified elite which operates behind the scene as managers etc. The overall standard of the staff has to be high in order to support not least a competitive industry.

By no means has there been a heightened awareness in recent years that tourism is a service industry and, as a consequence, interpersonal and customer-service skills should be given increasing importance alongside specific skills required by "technical staff" such as chefs or maintenance teams. It is now believed that these service or customer-contact skills are required for all occupations throughout the industry.

Whether taught in schools or on the job, as in the German Dual System, customer-contact skills have to be acquired in a more systematic way than it is presently done. To become fully international, it is not sufficient to make a guest feel at home by serving an international breakfast.

The objectives of training are a new mixture of technical skills and the often-mentioned competencies. Professional qualifications in tourism are many and include basic skills, specific knowledge and clearly definable technical abilities.

To ensure vertical as well as horizontal mobility, apart from the skills of:
- foreign language,
- computer and
- customer-service,

vocational training has to enforce:
- organizational skills,
- the capacity to communicate,
- the capability to impose oneself in difficult, dangerous situations and
- solve problems, manage conflicts,
- sociability, human understanding, respect for others,
- empathy,
- leadership.

In other words: innate qualities have to be enhanced and transformed into "working tools".

School graduates entering the vocational training system who want to work in the tourism sector have fewer chances than this industry suggests. For many of the occupations there are no training schemes at the middle level. Many jobs in tourism appear dynamic, interesting, international and pleasant; involving contact with different people and cultures, high-class accommodation, and possibilities for enjoyment and amusement. But reality falls short of these dreams. Many tourism-related occupations show a progressive increase in the number of employees dropping out. Not only the ones who made a wrong judgement about the prospect, but also those who suffer the restrictions to their social and family life, or who cannot bear the hard work conditions any longer. The very motives

4 Productivity and Vocational Skills in Services in Britain and Germany: Hotels. Prais, S. J., Jarvis, V. and Wagner, K.: National Institute of Economic and Social Research, London 1989.

attracting people to the industry become potential reasons for leaving it. This accounts especially for occupations on the middle level which rarely enjoy a thorough training. These employees should get the chance by basic training to move to another job within the tourism industry. This type of horizontal mobility, however, will only be assured by developing training schemes which take into consideration all possibilities of development, at least the ones which can be anticipated.

In Germany, and maybe in other countries as well, it has been proved that university graduates who seem to be equipped with competencies required in certain occupations do not meet expectations, either their own or the ones asked for. Therefore, the solution is not to have university graduates, but to develop vocational training schemes and open the tourist industry for employees who will be able to develop skills and competencies.

Recommendations

To meet the diverse requirements of the tourism industry, developments have to be observed closely, e.g. the change of customers' behaviour, the demographic and economic changes etc.

To meet the present requirements, experiences of more advanced countries should be included in new developments in territories which have no tourist tradition.

For the development of training schemes, the specifics of the industry have to be considered under several aspects including the given problems of employment, job conditions and security, internationalization and regionalization.

The challenge for vocational training lies in the transformation of competencies into skills. Since the era of the skilled blue-collar production worker is fading, vocational training in tourism can be a bridge for many other occupations in different fields and industries.

7.3 Internationalization and Professional Tourism: Vocational Training Responds to the New Needs of the Tourism Sector

by Ms Colette Arnold

Ms Colette Arnold is Inspector of Technical Education in the French Ministry of National Education, Research and Technology

The economic importance of the tourism industry

Since the end of World War II onwards, international tourism has soared in a spectacular way. According to the World Tourism Organization, some 500 million tourists travel today against approximately 5 million in 1950. This number is expected to double and reach one billion on the threshold of 2010.

Assisted by the increase in free time and leisure in industrialized countries as well as by the globalization of exchanges, tourism finds itself among the fast developing sectors; by the year 2000, tourism could account for 338 million jobs worldwide against 212 million presently recorded. As time goes by, tourism will become one of the largest industries in the world.

The tourism sector constitutes therefore a very important foreign currency input for destination countries and, consequently, is an asset in the balance of payments of target countries.

An uncertain economic sector subject to numerous influences

The very nature of tourism activities makes them vulnerable. The sector is highly sensitive to hazards –the fluctuation of monetary parities, climatic conditions, fashion, political instability, attacks on a territory, insecurity, economic recession – which can cause the flow of visitors and proceeds to vary dramatically from one year to the next.

Country	Tourists (millions)	Market share
France	66.8	10.8%
United States of America	49.0	7.9%
Spain	43.4	7.0%
Italy	34.1	5.5%
United Kingdom	26.1	4.2%
China	23.8	3.9%
Mexico	22.7	3.7%
Poland	19.5	3.2%
Hungary	19.5	3.2%
Canada	17.6	2.9%

Arrival of Tourists in 1997

Country	Billion US$	Market share
United States of America	75.1	16.8%
Italy	30.0	6.7%
Spain	28.2	6.3%
France	28.0	6.2%
United Kingdom	19.9	4.4%
Germany	19.0	4.2%
Austria	12.4	2.8%
China	12.1	2.7%
Hong Kong of China	9.0	2.0%

Income from Tourism 1997
Sources: Organisation Mondiale du Tourisme, Secrétariat d'Etat au Tourisme (France)

Leading countries in the sector must by now take into account the emergence of new competitors. Available projections show, for instance, that Asian countries will see an approximate 6% increase of international

tourist arrivals between now and the year 2000, whereas Europe will record only a 3% increase.

The main actors in tourism

What activities are encompassed in the notion of tourism? The official definition considers a "tourist" any person travelling outside his/her home environment for a duration of at least 24 hours, for a variety of reasons: holidays, business, culture, sports, spas or health, pilgrimage, transit, etc.

This definition implies that tourism, as an activity, relies on the combination of one or more of the following services: transportation, lodging, and an activity offered by a wide range of enterprises and agencies.

Among the major actors, one could mention:
- travel agencies whose function is to create and sell tourism products
- association tourism which facilitates the access of the middle classes to leisure and tourism
- tourism institutions whose mission is to promote the tourism potential of a city, a county or a region;
- other economic actors such as road/sea/air transport carriers who organize travel, the hotel trade (including open-air lodging), catering (in all its forms), congress halls, leisure parks, covering accommodation, food, organization and holding of meetings, free-time occupations, etc.

What competencies are these actors expected to have?

In general (with the exception of adventure tourism!), a tourist wants to be taken care of from the very minute he/she leaves home, at the airport or the railway station, enjoying the certainty that everything will run according to plan until he/she returns.

Beyond the indispensable skills in communication, languages and information techniques, it becomes increasingly necessary for tourism professionals to master commercial techniques, computer sciences and management linked to the knowledge of other cultures.

Being contact professions, all professions in the tourism trade demand a high degree of availability, a deep understanding of psychology and often the ability to react immediately. In all activities, beyond professionalism and technical skills, service is a sacred duty: a well-done job finds its acknowledgement above all in the client's satisfaction.

Issues in the job market

Industrialized countries

Although jobs are being created every year in these countries, they are not sufficient to absorb new graduates from schools or universities. Within this context, the jobs offered in the tourism sector are often underqualified, particularly in the first employment. It is also important to know that the salaries of beginners are, as a whole, rather low (this trend is particular marked in the direct tourism sector, less clearly in the hotel trade and catering sectors). Many jobs are highly seasonal (thus making jobs very precarious) and their personnel highly mobile resulting in varying quality.

Developing countries

Paradoxically, it is in those countries in which tourism is developing, or countries for which tourism could represent an important factor in the establishment of higher standards of living, that tourism-related jobs are not really attracting people in search of a job. Consequently, the personnel hired is unqualified and unmotivated as, for reasons that could be cultural, the notion of "service" is often linked to the notion of "servitude".

It is often said that informal on-the-job training is more than enough. However, empirical practices – even if linked to a high degree of willingness – cannot replace professionalism when faced with clients' expectations.

The future of tourism and hotel trade layout

Regardless of the level of development of a country, and in parallel to the structured sector represented by large tour operators and international hotel chains, the enhancement of the cultural and natural heritage and the development of sports leisure constitute the strong trends of the last years.

Some examples of achievements:
- Communities grouped in tourist projects in Romania (tourist zone of Transylvania), Jordan,
- Labelled lodging, such as "Eurosites" which cover 17 European countries and whose objective is to improve the quality of rural lodging,
- Eurovillages integrated in the local environment (the French example of VVF Vacances).

These achievements usually rely on local resources (natural parks, rural tourism, rooms and tables-d'hôte, local craft, etc.). The link with the protection of the environment theme is self-evident.

These trends are not to be understood as amateurism; on the contrary, they require a solid, well-adapted vocational training based on quality procedures to the exclusion of some forms of endemic laxity which unfortunately can be seen everywhere in the world.

The range of jobs in the tourism sector is therefore quite wide and, together with traditional jobs, new competencies are needed, created by the rapid development of new, diversified forms of tourism.

It is worth pointing out that the sector of tourism is an important pool of outlets for young girls and women, whether directly or on the level of induced jobs.

What should vocational training offer within this context?

A few decades ago, production of goods and services was accompanied by division of work and generated mainly unskilled jobs. Qualification was lodged between the skills acquired by training and the skills necessary for the job.

This limiting set concept was slowly replaced by a wider evolving concept which allowed for a faster, better-suited way to meet the needs of the economy: in this case, the development of the tourism sector. There was, therefore, a shift from an adequacy-oriented to a prospective conversion-oriented vision of training.

In this sector, one has to provide vocational training able to meet new objectives. In addition to traditional notions, it will have to encompass entrepreneurship, creation, management and development of micro-projects. Local potential in terms of natural environment, arts-and-crafts, culture and traditions will have to be taken into account. In other words, everything that highlights the notion of authenticity sought by an always increasing number of tourists who flee from the standardization generated by mass tourism

In *industrialized countries*, training has been offered for many years now and technological / professional diplomas validate this training at all levels (from workers and employees to executives).

Training is offered either at school, paired with numerous practice or training periods in enterprises, or through apprenticeship.

Training is constantly updated so as to suit developments and meet the needs of professionals. They in turn are closely involved in the creation and implementation of diplomas.

Thus, new forms of tourism (such as business tourism, cultural tourism, industrial tourism) are taken into account and incorporated in training. This presupposes a constant updating of the scientific components of training, the modernization of technological equipment and the recycling of trainers, whether teachers or in-house tutors.

In *developing countries*, as mentioned before, there is a strong deficit in terms of training, both in relation to formal and informal education, often linked to an absence of tourism and hotel infrastructures.

We could outline some ways which, in these countries, could improve the quality of vocational training in the field of tourism:

1. Building – as early as possible – young people's awareness of the notions of "reception" and "service", within the framework of sequences aiming at the discovery of economic actors: the enterprise in particular. These sequences already exist under different headings depending on the country: technology, production activities, discovery of the economic environment, etc.
2. Information and strong involvement of all the actors in the stages of school and vocational orientation: advisors, students, parents, educators, professionals in the sector.
3. Selection and training (or recycling) of professors having the knowledge and the know-how linked to a significant experience in a tourism or hotel sector enterprise. In this phase, one could recommend exchanges of professors or training courses within the framework of cooperative actions.
4. Establishment of structured in-house training in partnership with company professionals who could act as tutors of trainees or train them through apprenticeship.

Common recommendations in relation to training

1. Alternation of training places

It is indispensable for a vocational trainee in the field of tourism – as is the case of any other training – to be able to use his/her knowledge in order to solve real-life problems and acquire professional know-how in a work situation: this is the meaning of alternation, whether in a school or in an apprenticeship framework.

If alternation is unanimously acknowledged as a necessity giving a meaning to vocational training and as a trump card in the hands of young people, it then becomes necessary to improve the way it functions.

Particularly in the field of tourism, it would be appropriate to intensify the mechanisms allowing young people to have in-house training periods abroad, mainly in European countries.

This is channelled by the elaboration of institutional relations with foreign employers' organizations, the solving of regulatory issues (social security, insurance, indemnity, etc.), by validation procedures and by the enhancement of this experience.

An exchange system should provide for the availability of documents translated in the various European languages; such as diploma profiles, evaluation cards, conventions, etc.

Finally, in order to assist the European and international mobility of young vocational trainees, it is

important to obtain adequate funding, particularly within the framework of European programmes (i.e. Leonardo).

2. Continuation of work on the equivalence of training and diplomas

It is advisable to use the work carried out in this field by CEDEFOP or other organizations in order to enhance the professional mobility of employees; if not on an international level, at least within Europe as a start.

3. Development of continuing training

In the pursuit of higher qualifications for people working in the field of tourism, it becomes imperative to develop on-going training mechanisms. The financing of continuing training falls within the sphere of state competencies, yet the equipment and the trainers working in initial training could be used within this mechanism, with a clear impact on the profitability of investments and the valorization of trainers.

Conclusion

Constantly growing, the tourism sector is an important pool of jobs corresponding to new needs or needs still to be covered. Thus, the development of quality in tourism arrangements and accommodation, the enhancement of the heritage and the professionalism of tourism actors on a local level will be the conditions creating a supply addressed to a demanding clientele wanting the best value for money.

Destination countries will therefore have to be able to offer diversified products and skilled manpower.

Vocational training in this field will have to suit the social and economic environment of a country and/or a region.

Professional integration depends on the quality of training as well as on economic growth. This growth is based on the quality of work, i.e. initial and continuing training.

Training in the tourism sector represents therefore a real investment: a bearer of economic growth for all our European countries and, obviously, for competitor countries as well.

7.4 Internationalization and Professional Tourism: Vocational Training Responds to the New Needs of the Tourism Sector *by Mr Nikolaos Skoulas*

Mr Nikolaos Skoulas is former Secretary-General of the Hellenic Tourism Organisation (E.O.T.)

Ladies and Gentlemen,

I would like to congratulate the organizers of the Symposium for their apt and timely initiative to organize this symposium on the subject of vocational training on the threshold of the 21st century.

During this four-day period, distinguished professionals from 50 European countries will present and analyze the great importance of vocational education and training at this historic juncture of internationalized economy and rapid technological developments. This importance is self-evident for the services sector and especially for tourism which is the focus of my work.

It is our great wish at this symposium not only to arrive at a consensus but also at common proposals which, according to Mr Gerassimos Arsenis, Minister of Education., will form a European platform for the UNESCO Seoul Conference.

Before I come to the matter in hand, from the viewpoint of Greek tourism and its connection with the world market, allow me to make some remarks and attempt to clarify the framework within which we move, as well as to identify the factors which make up the tourism product, quality and competitiveness.

Andrew Carnegie bequeathed us the prophetic phrase: "Take my people and leave my factories and soon they will be dilapidated. Take my factories but leave my people and soon we will have new and better factories".

It is difficult to contest the wisdom of this phrase. In a world continually assuming new forms due to rapid economic, technological, political and cultural developments, which we, as managers, are asked to cope with, we come to realize that the human factor is indeed more important than buildings, machines and systems.

Not one of the other factors of production can be set in motion without man, whose participation is being assured either by his muscular strength or, chiefly, by the use of his mind. Therefore it becomes clear why

all of us, at times, have heard or declared that "people are our most important resource".

In our opinion, the enterprises which stand the greatest chances of survival and development are the ones able to identify the new forces which shape and transform our surrounding world. Forces set in motion at faster rates than these we are able to realize and towards which we ought to adapt our action.

On the other hand, their catalytic influence on the *social fabric* and its previous structures brings about changes that even the most important analysts of the industrial system are unable to foresee.

However, if in the whirlpool of all these transformations, we confine ourselves to examining this or that social change only from one point of view, without dealing with the essential interconnections, we are doomed to remain external observers of the chiefly economic phenomena.

Such an attitude prevents us from understanding the main idea, because man is not the passive reflection of an all-powerful and impersonal social mechanism, but plays an active role, enjoying at the same time an extremely important autonomy: he does not simply reflect social reality, he also builds, creates and transforms it.

In this reality, the enterprises, the national economy, the tourist industry find themselves facing a better informed and more demanding customer who does not accept paying irrational prices, who insists on quality and service excellence, and demands to be fully informed on the composition of the products he buys and, at the same time, he desires to know what industrialists, craftsmen, merchants and *tourist agents* do for the protection of the environment and the rational usage of natural resources whereon his own and his descendants survival will be based.

All these make urgent the need to *redefine* our role not only as businessmen, managers, and *definers* of educational policy, but also our attitude towards the most important investment, the most valuable resource we have at our disposal, namely the people who become executives in our enterprises and organizations, and we must base every endeavour for our survival and development on them.

It is suggestive that from the sociological point of view, there is this distinction of meanings of the terms according to which buildings, mechanical equipment, raw materials, computers etc. are defined as means of production and, after the intervention of the workforce, intellect and experience, involving therefore the creation of systems, methods and productive result, the entire entity is then characterized with the term productive forces.

One of the greatest sociologists of our time, John Naisbitt, in his work "Megatrends" maintains that the most important development at the end of our century is the transition from the industrial society to the society of information.

Already, on the threshold of the new millennium, catalytic, rapid changes serve as a landmark of a new order of things dominated by scientific progress of inconceivable speed and technological development, applications resulting in the globalization of economy and society, in the global village of Marshall McLuhan, in the world of Internet, e-mail, CRS, the new network economy and who knows of what in the future.

It is a fact that a percentage higher than the 2/3 of the people in the post-industrial era offer the greatest part of their man-hours for the creation, collection, and processing of information distribution, taking advantage mainly of electronic technology.

Here, however, we must stress the fact that each time a new technology is introduced, the generating source has been human research: its goal is to serve humanity and its means of preservation the human response; otherwise this technology is rejected.

Without well realizing it, we find ourselves in a new international order of things based on knowledge and on specialized knowledge. In this new reality, the comparative advantage is no longer confined to the traditional factors of production (land, machines, capital) but to the correct use of human resources and technological development. However, in essence, these two parameters are in fact one and the same: two sides of the same coin.

The purpose of these introductory comments is to demark the distinguishable difference between traditional industrial man, who was a servant and component of the machine, and modern man, who is recognized as the primary purveyor of changes in our post-industrial society, guiding and controlling the new technologies.

If we adopt this viewpoint, then it must constitute the basis for a reinvestigation and reorientation of our understanding and our attitude towards selection, education, training, development and incentives given to our executives and employees, so as to achieve the goals of our enterprises and sectors of economy.

Let us have a look now at what all this means for tourism in our country, in the Mediterranean and why

not in Europe as a whole. Allow me to refer briefly to our own experience.

In the limited time of this Symposium, I will not venture to develop in depth the subject " Development and Forms of Tourism", but I will share with you some basic observations and directions, some quick thoughts, which are the basis for the formation of the existing tourist policy.

First of all, we would not be talking about "forms of tourism" and their relationship with development if many of the tourist countries, among them Greece during the last decades, had not had the experience of a rapid increase in mass tourism, if, in other words, they had not been through the experience of negative repercussions of the development of mass tourism, namely:

- The excessive accumulation of tourist activity in only certain areas of the country with consequent economic and environmental problems
- The intense seasonal demand
- The comparatively low exchange return.

At the present juncture, partly as a result of the development of mass tourism, Greek tourism is at a critical turning point. On the one hand, there are some important achievements: really impressive figures (over 12 million tourists, 1 million beds in main and auxiliary lodgings etc.) and a unique positive contribution to our economic indicators (participation in invisible resources by 35% and in coverage of the trade deficit by 48%).

In order to better appreciate the importance of tourism for the Greek economy, it suffices to mention that the production directed to the satisfaction of tourist consumption surpasses 14.5% of Gross Domestic Product.

On the other hand, there are some very serious negative messages:

Firstly, the negative development of arrivals and overnight stays during 1995-1996 which forms an unstable quantitative image and demands the attention of both the State and the Private Tourist Sector. Fortunately this negative trend has been reversed in 1997 by a 9.0% increase followed by a further 10% arrivals increase in 1998 and an optimistic forecast of a further 8-10% for 1999.

Furthermore, there is a continual worsening of the country's already heavy dependence on mass tourism of low exchange return. (This is proven by, among other things, the steadily increasing proportion of charter flights in the total number of arrivals at our borders.) An accompanying upsetting qualitative image has been created. This image also is the result of other contributing factors: mainly the price freeze of tourist services, itself the result of supporting the competitiveness of the Greek Tourist Product exclusively through its low price and not by its structure and standard.

This turning point dictates to us, in an imperative way, that renewal and restricted development (a conditional and controlled development) is necessary.

The reversal of the negative developments of the years 95-96 (which were predicted in time by the H.T.O. in the mid 80s) demanded, and still demands, the consistent and steady tourist policy of upgrading, renewing and diversifying the tourist product. This will develop in our country the thematic forms of tourism (culture, ecology, conferences, athletic, marine, therapeutic, etc.). These are aimed at a higher-income clientele, with a higher educational level, and a better time distribution. So, we can achieve a general improvement of the level of all services (private and public) which are related to tourism.

It becomes clear, therefore, that Greek tourism faces, among other things, a challenge: if it continues to be dependent on mass tourism of low exchange return, it degrades its own potential (the country's natural and cultural resources.)

Being thus dependent – even if it were desirable – becomes impossible in the European framework. The framework of European tourism is where the cost of services is already high and continuously increasing wherever it is observed. Because of this reason, International Tourism turns to markets outside Europe. Thus Europe and Greece have no other solution than to upgrade their tourist services.

As things stand at present, our basic goal on the national level is the quality upgrading, and the enrichment-diversification of the whole Greek tourist product, (enhancing offered services and making an "opening" to new forms of tourism) so as to make it more competitive and with these parallel goals:

- The decrease of mass tourism and the gradual independence from the monopoly of big tour operators
- The extension of the tourist period, which lasts only seven months, thus having a negative influence on our competitiveness
- The promotion and protection of the environment (natural and human) as a tourist resource.

It is self-evident that these basic goals are fully interdependent and interrelated and that they may be further broken down into a series of subtargets and policy measures.

We consider the new, alternative forms of tourism to be the so-called thematic tourism. This tourist demand is characterized by the specific interests or tourist activities at destination (culture, ecology, athletics, nautical athletics etc.) or by the specific aim of the

tourist transport (conferences, exhibitions, health trips, etc.). As it is, many equivalent forms of tourism are mentioned in tourist handbooks, and it would not make sense to mention them here though they have some common characteristics that are very interesting things for our country:

- They are not strictly divided among themselves, but on the contrary they overlap. One form of tourist clientele is occupied with a number of activities. For example, marine tourism is usually connected with ecology (snorkelling, bird watching, visits to seaside resorts with a special physical beauty etc.) and the cultural sector (visits to archaeological sites, traditional residences etc.).
- Their demand has a better time distribution and shorter seasonality and some of these are active only during the off-peak tourist season.
- As a rule, they have a higher economic return.

Consequently, we are directing our efforts at a methodical and systematic reorientation of our tourism supply and of our local tourist markets towards new, thematic segments of tourist demand.

However, for this purpose, there must be a satisfying local tourist product. It must be composed not only of existing lodgings and their complementary tourist services, but also, in as much as is possible, offer a rich selection of possibilities-infrastructures in sports, recreation, and time for activities of an educational and creative nature.

I am an optimist. For the first time in our history, the political powers, the productive classes and Greek society as a whole consent and, up to a point, are committed to what must be done.

It is obvious to all of us that the competitiveness of Greek tourism can no longer be based on the traditional resort model "sun-sea folklore" and on reduced prices, which inevitably lead to a vicious cycle of quality downgrading.

Our future lies in an enriched, quality tourism supply which protects, presents and develops our only resources, thus satisfying the demands of the wealthier social and economic groups with activity-oriented tourism.

However, planning and complementary infrastructures are not enough. First of all, we need education, training, professionalism, and the establishment of a tourism conscience, not only for those who are occupied professionally with tourism, but also for the entire Greek society.

So, only by enriching the tourism product, will we offer high-quality services to foreign and Greek guests, thus also enhancing the quality of our own lives as well.

We are working systematically and strenuously in this direction.

In the next few days the Hellenic Tourism Organization, in the framework of its endeavour to upgrade the offered tourism services and diversify the tourism product within the measure 1.6 of the sub-programme "Tourism", will proclaim 367 (three hundred and sixty-seven) actions of continuous vocational training which are directed to the unemployed, working people, executives, tourist business operators, and other enterprises that are directly related to the tourism sector and benefit from the goals of the Tourism sub-programme.

The thematic units of these actions concern:

1. Marine Tourism Marinas
- Organizing, operation of tourist ports
- Further education of reception employees to provide services at marinas.
- Repair of tourist yachts
- Protection of sea environment, port-shore cleaning

2. Mountain Tourism
- Mountain trails, rescue-teams lift
- Mountain rescue teams
- Mountain hosts
- Avalanche rescue teams
- Mountain guides

3. Health Tourism
- Organization and operation of tourist health installations
- Spa operation
- Spa therapy, sea therapy

4. Conference Tourism
- Organizing-operating of conference centres and exhibition areas
- The specialization of tourism higher education graduates in conference tourism.

5. Ecological Tourism
- Eco-tourist trips
- Eco-guides

6. Cultural Tourism
- Cultural trip guides

7. Upgrading of Tourism Services
- Training of taxi drivers
- Traditional cooking gastronomy
- Wine-tasting knowledge
- Care for people with special needs

8. Special Form of Golf Tourism
- Organization and operation of golf
- Golf marketing

9. Athletic Tourism
- Training of employees in athletic centres and installations

The entire resulting cost of the implementation of these actions, yet to be announced, rises to the sum of 2.8 billion (2,800,000,000) drachmas, 75% of which is covered by financing from the European Social Fund.

Furthermore, 194 training actions will be appointed to the National Centre of Public Administration for the training of H.T.O. employees, district employees, ministry employees, and officers and recruits of the tourist police in areas concerning:
1. Golf marketing
2. Conferences and exhibitions organizing
3. Training of guards of archaeological sites and museums
4. Tourist police training
5. Tourism legislation and its application
6. Investments dimension of tourist legislative-development law
7. Communal law
8. Information offices executives
9. Studies evaluation
10. Executives of the Offices of the Exterior
11. Training of H.T.O. and tourist police employees in computer science in view of the development of the H.T.O. computer science network.

The cost of these actions will amount to 900 billion drachmas. In total, 37 billion drachmas are provided to the specialized tourism training programme for the upgrading of quality and enrichment of tourism services.

Being a person who was and will continue to be professionally occupied in education and training, I would like to close with some remarks, drawn from my experience, as to what constitutes effective training.

Certainly policy commitment and the generous use of funds, which we have at our disposal, is not enough. First and foremost, what is needed is a prudent utilization of these funds so as to increase productivity, with measurable quantitative and qualitative results, but also in connection with the labour market.

There is not, nor could there be a specific method or training technique or development technique which could serve as a general application in different conditions and needs.

Obviously the type of education is determined by whether it is intended for the development of capabilities at basic, middle or upper levels of management. It determines the methods, techniques and the means which have to be utilized for the best possible results.

However in the selection of the best method or technique, other criteria are included and they must be assessed as well. They are:
- The relation of cost/benefit
- The desired content of the program
- The principles of learning
- The suitability of installations and equipment
- The preferences and capacities of the trainee in relation to those of the trainer.

Every different method used has different characteristics. Lecturing, for example, entails a relatively low cost and may be most suitable for the transmission of theoretical knowledge while, in the case of the practical education of pilots, the cost does not even constitute an object of consideration.

In the case of microcomputers training, it is possible that the best method would be a combination of a little theory and a lot of practice.

In any case, an organization or enterprise selects the programme as well as the development method that suits it best on the basis of its clearly defined goals and its monitored educational needs.

Training on the job is the simplest, most basic form of training. An employee is shown how to operate a machine, he is checked continuously at the beginning and, progressively, checking is reduced. Thus he becomes experienced and produces while he is learning.

However, training at work costs. The trainers must spend time to supervise training. The more trainees there are, the more time is needed for the trainer to go from one trainee to the other.

A second problem is equipment, which also costs. Trainees are not going to produce at the same rate as a trained worker or technician for example, and, therefore, it is logical to assume that the production equipment will be tied up for longer periods of time and that there will be likely malfunctions.

The greatest advantage of training during work is that it allows employees to experience true working conditions.

The selected, experienced "mentors", " coaches" and trainers, before assuming this responsibility, are advised to participate in some kind of "train-the-trainer" process, and to master the basic principles of skill training which can be summarized as follows:

- explanation of what, how and why something is being done
- exhibition of the correct way of performing each piece of work
- application by the trainee
- error correction and
- repetition (if needed) until the employee masters his work

We would like to stress that those employers who consider trainees of subsidized programmes as a "cheap" working force are mistaken. As mentioned before, the doubtful productivity of the trainee, in combination with the great amount of time that the trainer has to sacrifice, lead this assumption to a dead end.

Training should not be seen as an expensive procedure, but chiefly as an investment which will bear fruit in the future. The most common method of training and development outside the working place is the classic method of lecture in a teaching room with the participation of a number of trainees which may fluctuate from 5 to 30. Despite its relatively low cost, it is suitable only for transmission of theoretical knowledge without great expectations for participation, repetition and relation to the work object.

The situation, however, can be improved by the usage of audio-visual multimedia such as videos, slides, CD-ROMs and other applications of digital technology.

Other useful techniques are simulation, role personification, case studies, distance-learning and laboratory training. The last one is ideal especially for interpersonal relations, operations in the framework of leading groups, systematic decision taking etc.

The training programmes are classified into the following categories:

- Basic Skills Training in all departments, groups or, independently, on-the-job training. All company employees, no matter how low in the hierarchy scale they are, must be subjected to basic training which will allow them to understand their economic interests and to become acquainted with the products they sell or the services they offer.
- Training for the people in charge and the heads of departments. Every person in charge or head of unit should go through an intensive training which will allow him to function as a business manager. Furthermore, he should play the role of trainer for the personnel of his department.
- Education and Training Programmes for directors and deputy directors. Whatever a director needs to know to truly direct with knowledge as if it were his own business. He must possess a full knowledge of his work object, of the economic consequences of each action of his, to be able to take initiatives with the flexibility which the competitive environment demands, and to define the results on the budget which must always be under his control.
- Principle Programmes and Management Training for all executives (inside and outside the company) with an emphasis on group operation, decision taking, communication, employee motivation etc.
- Special Training Programmes for all employees, with personal computers, foreign languages, hygiene, accident prevention, and overall quality included.

The funds we spend on the education and development of human resources is the best long-term investment which we can make. The training centre must be considered as one of the major departments of a company. They must be staffed by professionals who cherish the confidence and support of the company administration. However, neither is this sufficient. Operational management at all levels should constitute an inseparable part of the training procedure.

Every manager in the company must also be a trainer: something which is good to be included in the description of his responsibilities. As the training of our subordinates progresses and they become more efficient and productive in their work, we have the possibility to give them greater responsibilities, thus lessening our own load. In this way, we will have the time left to offer more training and decentralize our work even more. Executives and employees who are being offered training and development programmes on a continuous basis feel more dedicated, loyal, secure and, consequently, more productive.

Ladies and Gentlemen,

New technologies have entered our lives with breakneck pace in the transition from the industrial era to the new society of information. In order to exploit these technologies effectively to improve our life terms and conditions, emphasis must be given to man who, beyond doubt, is the most important element in the production process.

The opening of the market within the framework of European integration marks a new era characterized by great possibilities for all of us, but also by conditions of strong competitiveness in the market. The people who will not manage to adapt to these new conditions run the risk of shrinking or maybe disappearing.

I truly believe that we have nothing to fear if we ascribe the proper importance to the human factor, and develop the endless potential which remains inert in our executives and our personnel with the application of certain of the proposals we have made. This will be the most productive investment that we could make at this historic juncture.

7.5 Internationalization and Professional Tourism: Vocational Training Responds to the New Needs of the Tourism Sector *by Mr Kurt König*

Mr Kurt König is Head of Unit at the DG XXIII, European Commission, Brussels

Summary

Reflecting the need to develop the human resources and management skills of Small and Medium-Sized Enterprises (SMEs) in the tourism sector at a time of rapid change, and recognising that they are in increasing global competition, can serve as a springboard for future entrepreneurial talent.

The acquisition of knowledge and skills in the context of a knowledge-based society is a non-material investment in human resources with the highest priorities.

Following the extraordinary employment summit in Luxembourg (20/21 November 1997) the Commission's Communication "Fostering Entrepreneurship"[5] underlined the increased importance of the creation of new enterprises and, hence, the need to foster an enterprise culture.

Entrepreneurship training for all SME sectors for the preparation to start up a business and specialized training for the improvement of business and management skills are crucial. Measures in this respect are required at both Member State and Community level.

The BEST Report (07 May 1998)[6], in its second volume, devotes an entire chapter to training and education. It identifies the insufficient presence of enterprise concepts and entrepreneurial skills in the education systems in Europe as a fundamental culture problem.

Several kinds of measures are proposed in order to improve this insufficiency.

Schools and colleges have to be more effective in disseminating information about the role and economic significance of the entrepreneur in the modern economy.

A more positive attitude towards "failure" is advocated, and SMEs should be encouraged to work together with schools.

Having established the general political context, a short introduction to the main objectives of the Community's tourism policy and the economic importance of this sector for the European Union, the main lines of the current training policy will be set out.

The EC treaty provides for a more sustainable development, a higher employment rate, a sane environment and social and economic cohesion as the fundamental goals.

Training measures for tourism have to reflect those objectives but also have to take into account the general trends such as the restructuring of the sector, the ever increasing competitive pressures and the usage of information technologies.

Training and dedicated accompanying support services are regarded as means suited to improve the competitiveness of Europe's SMEs.

At this very moment, as scheduled in the work programme for 1998, DG XXIII is preparing a communication on training and SMEs. Whilst this communication is not specific to tourism, the particular aspects of tourism will be highlighted and many of the problems are common to several SME sectors.

Typical examples are higher quality requirements and environmental questions as well as the need to innovate products and processes and to cooperate internationally. Therefore, and for reasons of subsidiarity, Community projects have a transnational character and often concern improved cooperation and networking at European level.

With regard to training in the tourism sector, the tourism conference (Llandudno, May 1998) has identified three major issues:

- review training provision across Europe to determine suitable areas of common approach that could lead to models for future provision that permit subsidiarity and adaptation and applications to meet local needs;
- consider and evaluate possible Community-wide benchmarking standards for SME training provision;
- devise qualifications that are better organized to meet the severe time constraints facing most SMEs.

Finally, some practical examples of Commission projects will be reviewed. A new major project in the area of training referred to as "Business Education Network in Europe" (BENE) will shortly be presented.

5 COM(98) 222 final of 07 April 1998

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8 Non-Commercial Exchanges and Vocational Training

8.1 Culture: the Quartery Sector – Its Relationship with Education and Employment

by Mr Filippos Dracodaidis

Mr Filippos Dracodaidis is Cultural Manager in Greece

I will start my intervention by defining the concepts of "culture", "quartery sector", "education" and "employment". The term "culture" comprises all goods[7] offered by the spirit, by the intellect and by craftsmanship at a specific historic moment within a specific society. These goods are recognized as going beyond the lifespan of their creators, as exceeding the limits of an ordinary life by reaching the outer world of immortality. Every society considers that these goods need to be preserved and accumulated, giving birth to what we call tradition, which creates the feeling of social continuity.

Within this framework, "culture" constitutes a surplus that is distributed to the members of a given society as a return for their economic contribution and for their personal and individual work. In this respect, "culture" is defined as a social good incorporating the economic dimension, not because time and investment in resources have been necessary, but mainly because its sole existence suffices by itself to prove the wealth of a society. We can be sure that the greater the field and the accumulation of "culture", the greater the expectation and the survival of a given society.

The investment in "culture" provided by a given society does not provide the returns we see appearing in the economy. There are many reasons for this discrepancy. I will enumerate a few: the investment in "culture" is not made in an organized way and, when it is made, it is not for obtaining a profit (I mean profit in a certain currency). So, it is necessary to have a critical mass of investment (expressed in infrastructure and human capital) and an extended incubation period before starting having a return in society. Louis XIV invested in castles, artists, writers, gardeners and architects before getting his money back in the form of power, glory and the reinforcement of his monarchy (and his society). He needed years of investment after his enthronement. On the other hand, "culture" precedes education, which means that time is needed for incorporating "culture" within the social fabric whose cohesion is guaranteed by education amongst other parameters. It is then that positive results coming out of "culture" flourish within society. We must not forget that "culture" is produced by individuals. It is only when these individuals coincide in a common view of the world, to a kind of theory that explains the phenomena of their time and their expected continuity into the future, that this theory becomes a cornerstone of society and offers a minimum of socially accepted returns. History is full of misunderstood lonely geniuses ("génies méconnus") while it is full of mediocre (but useful) sheep that struggle to extract something good out of their obsolete minds ... and they succeed in delivering new minds! Last but not least, "culture" is produced and disseminated to the benefit of the majority (the "many" as opposed to Shakespeare's "happy few"). This happens quite often against political obstruction and against oppressive regimes. In this case, support is necessary from smaller or larger groups so that the returns meet social approval. For all these reasons (many others could be listed by specialists and experts on the subject), culture (without inverted commas when it is established within a society) has a slow start and is based on many intangibles. In few words, culture is an activity that does not follow the economics peaks and valleys.

Here we have all the differences to other sectors of the economy. The difference between culture and the primary sector is evident: culture has nothing to do with land and pastures. Culture has nothing to do with capital, equipment, labour costs; these parameters concern industry, the so-called secondary sector. As far as the tertiary sector is concerned, services are related to a well-defined market, emerging, stable or declining which is in equilibrium between supply and demand. In this context, supply and demand are measured so that supply satisfies on-the-spot needs of demand (and vice-versa) through different forms such as added value, competitive advantage and quick adaptation to any change that risks jeopardising the market balance. I want to say that the tertiary sector of the economy is of immediate return, sensitive to fluctuations, influenced by the unrelenting need of profit maximization for the minimisation of the risk of its falling out of the market.

The relation between culture and the tertiary sector is small, not only because culture has a slow start and an extensive and broader (as well as expanded) life-cycle due to the fact that the goods of culture live longer than those who created them, but mainly because culture is a personal matter, has nothing to do with immediate profit, does not care about market equilibriums, is not related to economic risks. Even when extremely important events take place and change the face of society and of the economy, culture keeps its own pace. As an example, the fall of the Berlin wall in1989, while it changed the face of the world, did not

7 The equivalent of the French term "biens", "αγαθόν" in Ancient Greek.

inspire authors to write important novels that could be directly related to this important event. Similarly, the discovery of the New World by Columbus did not inspire anyone to paint a great painting or to compose some great music. However, one century later, Miguel de Cervantes wrote Don Quixote, this strange voyage in the realm of reality and imagination, a literary work that streamlined to a great extent the intellectual path followed by Western Europe and had a greater effect for many centuries on people and on European societies than the risky adventure of Columbus. These distinctions make me say that culture must be considered a "quartery" sector of the economy.

I say "sector of the economy" because, whatever we believe or we say, culture is a market; a market driven by supply. This means that the artist has something to offer to a potential public (call it "target group"). This public is estimated (by the artist) to be quite substantial and ready to express somehow its demands. In Western European civilization, anything that the artist offers is related to existing and accepted frameworks (social, cultural, financial) or, in many cases, it is situated out of the perceived social limits. Here is an example: while painters at the beginning of the 20th century supplied the market with academic, romantic and conformist paintings, Picasso started offering something different which did not correspond to the demand of a given public or target group. However, through successive and continuous aesthetic frictions and revolutions, Picasso helped consolidate a demand that is still flourishing, while academic and conformist painters fell into the category of " kitsch". This displacement from the academic culture to the Picasso culture creates the market, strengthens demand and (as a consequence) facilitates the robustness of supply.

We have to note that, in the cultural market, as long as demand remains latent, supply exceeds by far the needs of demand. Through this excess supply, demand starts taking shape and the market, fragmented as long as demand remains latent, starts being structured. As a result, supply and demand start balancing and the market finds sooner or later its point of equilibrium. Here is another example: the city of Athens could not offer a suitable place for musical events. Artists willing to show their talent and express themselves through performances were trying to find any place to perform. Sometimes, venues were inadequate (small, noisy, without proper equipment); sometimes, the organization was lacking; quite often, no media were interested.

The creation of the Music Palace of Athens concentrated the supply under the same roof, provided all necessary and up-to-date equipment, formulated an artistic programme, gave publicity to it, strengthened competition between performers. Demand overtook the Music Palace, not for the performer or for the performance, but for socialising and showing off. Today, after 6 years of operation, the Music Palace of Athens welcomes a specific supply that balances a specific demand. Supply and demand seem to develop for mutual benefit.

If culture is a market, its equilibrium and its potential of survival are guaranteed by "education". This term covers the concept of teaching, of knowledge, of training, of Kultur (I use the German word, which has a larger meaning than the word culture, as it encompasses knowledge and behaviour and customs). "Education" provided by nations and governments in order to fulfil the needs of the labour market and refill the pipeline of the economically active population has nothing to do nowadays with the ambition of our modern and developed societies to dispose of individuals that have a broad spectrum of knowledge. Due to this incapacity of the established educational systems to broaden the horizons of the individuals, culture moves in and (slowly but surely) takes the responsibility to train and attract permanently a number of people which will have "le bagage intellectuel" to understand culture and support it. These people are bound to constitute a market based on a coherent cultural demand.

"Education" as a result of culture (and of cultural development) takes the form of lectures, seminars, teaching academies, cultural workshops and the like. It starts being organized within the framework of higher education, I mean within the universities. When the American universities included in their programmes creative writing, cultural management, economics of the arts, Europeans considered these topics were worthless. The fact is that John Steinbeck followed creative writing courses, arts management is part of the curriculum in the Julliard Academy of Music, economics of the arts govern the Ghetty Foundation. We may not like the American cultural hegemony; however, we have to admit that this hegemony is not founded on cultural garbage only, but on many and diversified centres of excellence.

The European Union, which in its essence is an economic entity, has never dealt seriously and systematically with culture, a sensitive area that the Member States try to keep under strict control for political reasons not always clear, without taking into consideration the aspirations of their respective societies. If we add to this anomaly the real fact (many times corroborated) that the majority of the politicians is illiterate, the majority of technocrats are indifferent to culture, we can easily come to the conclusion that culture is not a substantial part of the European Union's long-term strategy. One can be illiterate, indifferent or blind. These disadvantages do not exclude the simple understanding that culture provides opportunities for employment with high added value.

Here are some examples again: Glasgow, a dirty industrial city, took advantage of its selection as Cultural Capital of Europe in 1992 and transformed itself into a cultural centre: unemployment decreased, small and medium-sized enterprises developed, the average income of the inhabitants increased. In Bilbao, a city suffering from the collapse of its industrial base, the construction and operation of the Guggenheim Museum created employment opportunities, increased the income of the municipality, gave a new look to the city, and attracted more than a million visitors in the first year of its operation.

The European Union published recently a working document entitled "Culture, the Cultural Industries and Employment" (reference SEC (98) 837) which conveys the message that culture is the most rapidly developing sector that offers employment to 3.5 million people, without counting the sub-contractors and the indirect employment these sub-contractors are generating. If we make the hypothesis that sub-contracting equals (at least) the number of those directly involved in the cultural industries, we have 7 million people in the cultural sector, leaving aside those in the tourism sector that profit from cultural activities.

I am afraid that trying to define in very broad terms the contents of "culture", "quartery sector", "education" and "employment", I gave a rosy picture of the reality. In order to balance my presentation, I have to consider some negative factors that obstruct the future of the cultural industries. The most important factor is that we are living (or we struggle to live) in an affluent society, in a world of speculation, in a globalized environment that is leaking from all parts, in a "virtual economy" as Professor John Gray says in his book "False Dawn, the Delusions of Global Capitalism" (1997). Supposing that Professor Gray who is teaching economics at Oxford is an enemy of the global society, we cannot ignore what George Soros (who profited a lot from the globalization of the economy) writes in his book "Soros on Soros" (1995): "The collapse of the global marketplace would be a traumatic event with unimaginable consequences. Yet I find it easier to imagine than the continuation of the present regime." And for those that cannot stand hearing Soros's name, I have to tell them that Robert Samuelson in an article in Newsweek, dated 14 September 1998, confirms that "the world is sick and tired of global capitalism".

We envisaged that the 21st century would be what Mr Fukuyama so naively instructed us to believe: "the end of history". We accepted the grandeur of those articles published in Foreign Affairs that dealt with the American planetary non-ending power, with the so-called "clashes of civilization". We have failed miserably. Because, as a Greek bouzouki player said in his autobiography "life is what is happening suddenly, while we are planning in our own way something that seems sure".

The 21st century may develop into a period of positive reshuffling, positive rethinking of our way of conceiving the world and living in it. Such a possibility is bound to reject the neo-neo-liberalisms, all the post-modernisms, all the self-indulgent avant-gardisms. If this happens, culture may rediscover its productive impetus and open new creative paths that will benefit the humanity at large. If we stick to the present ossified consumer society, it is certain that the social fabric will suffer. We must not forget that in our globalized world the Russian crisis is not an internal matter but a sample of a general crisis which happens to materialize in a society in transition, while it remains hidden more or less in our developed societies. Our so-called democratic regimes do not constitute a panacea for the rest of the world. And the world has already suffered a lot from our so-called democratic principles.

I believe I am deviating from my subject, but I wanted to present to you a series of thoughts and a series of dilemmas. We have to take both into consideration if we have in mind to create a solid infrastructure for culture and give a chance to the bet that the world can improve through more training, more openness, away from the misery of consumerism.

8.2 Cultural Activities and Vocational Training
by Ms Marina Lambraki-Plaka

Ms Marina Lambraki-Plaka is Director of the National Gallery and Professor of History of Art, School of Fine Arts in Greece

Dear friends, I am not going to use numbers in my presentation and luckily the numbers that have just been presented corroborate and support what I will very simply expose to you. My subject is "Prospects, risks and resistance in view of the culture of the next millennium".

Culture is indeed destined to play a leading role in the future society. And we mean a society whose citizens will have far more free time and will be ready to turn to culture, since education is continuously broadened and its quality and quantity keep on increasing. More and more people enjoy this good, this commodity. And in the future they will have far more free time not only to create culture, but also to consume cultural goods. You see, in a way, I am somehow forced to use this consumer vocabulary, this terminology, but I do this on purpose.

Society as it is today and will be in the future will go on being a consumer up to a nearly frenzied rhythm.

Any commodity, any good that cannot be included in this framework of consumerism is destined, or rather doomed, to disappear. Fortunately, culture has a lot of potential for development and consumption.

For reasons of methodology we should divide cultural goods in two groups: first, the works of art that come from our tradition at a national and international level and, second, those that are being created today.

Tradition, the diachronic inheritance of human creation has indeed endless resources of cultural treasures. Consumer society has indeed evaluated this invaluable resource of tradition and culture and has already organized its exploitation. Culture, and particularly the capital of art, can endlessly feed the mass media and their icon-worshipping clientele.

The endless potential of increasingly faithful reproduction is something that Walter Benjamin wondered about a few decades ago in his inspired way; it now constitutes a reality. Reproduction, of course, does not possess the halo or the mythical aura of the original. However, it endlessly increases the material value and prestige of the owner of the original: a museum or an individual collector. This is how the huge prices of works of art in the last decades may be explained. The original work, whose images are adored by the masses, now acquires the power of a priceless and miraculous icon. This generates a kind of pilgrimage to its owner: if he is a person, he is surrounded by the glamour and respect that money alone could never secure.

Therefore it is not accidental that governments build museums which are the grandiose temples destined to house their treasures and increase the profits of the tourist industry. Sometimes when these icons are not there, the very temple is enough; I am now referring to what happened to Bilbao with the renowned Guggenheim Museum, which has become a pilgrimage for the building rather than its content. This beautiful, extravagant creation of the American architect, Frank Ghery, shines since it is covered with invaluable titanium plates, and Mr Dracodaidis has already told you how many people it attracted to that colourless industrial Basque city.

We recently worked together with in this museum because we were both in a European programme. I talked to the people there, and they said that they estimate the museum will attract about 1.2 million visitors per year in Bilbao who do not wish to see works of art similar to the ones they can see in any European city, but the building itself.

On the other hand, museums which are traditional treasuries of the world's invaluable cultural heritage, such as the Louvre, the National Gallery in London and Washington, etc. are being expanded and renovated by distinguished architects in order to become more attractive or make their contribution more appealing.

Thus the free time of citizens claimed by many different sectors, together with the increasingly sophisticated mechanisms of promotion and advertisement, now determine the physiognomy not only of the temples of art, but also of the cities themselves. The temples of art shift the centre of gravity not to the content but to the "package" if you wish: apart from the already mentioned Bilbao, the Beaubourg in Paris has also created an explosion of interest a few years ago because of its unusual, paradoxical architecture. The city is thus transformed into a setting for consumption. Post-modern architecture, extrovert, ornamental and amoral is the eloquent sign of this change. The city becomes the happy scene of consumerism. It is not accidental that the market centres of the north, the commercial pedestrian ways of the south, that is, the commercial centres in general, claim the leading role in the rapid transformation of the physiognomy of the cities. If museums wish to survive, they will have to follow the rules and laws of this new function of the super-consumer, neo-liberal, global society where we are living now.

Culture as an idealized consumer commodity offers its prestige to the adjacent consumer goods, such as markets, expensive boutiques, and restaurants like the ones under the Carrousel Square in Paris, designed by the distinguished architect I. Pei, that surround the new Louvre. Tradespeople have always found a hospitable place to sell their goods in the various pilgrimages. Let us remember the incident when Jesus threw the tradespeople out of the temple of Solomon. Something like this would be unrealistic and unprofitable today. On the contrary, we should exploit to the maximum the magnetic attraction engendered by the ill-suited marriage between consumption and culture, in order to attract more people to the latter. We should bring ordinary people closer to culture, the common folk, while turning them away from football violence and cheap, mass entertainment. We should build wonderful enchanting temples of art and surround them with markets, walks and recreation centres.

Let us then direct the course of the impetuous river towards the unproductive and thirsty fields of mass culture and mass education. The path of consumerism is not reversible. It is understandable that the administration of culture creates many new jobs and careers. This was the first thing I wanted to talk to you about. Now I would like to dwell on contemporary creation and the current mode of exchange of cultural goods.

What is the nature of contemporary artistic creation in the world village of McLuhan? My teacher, Pierre

Francastel, used to say that "the dominant mass media impose their rules on the secondary ones".

Plastic arts used to be the primary means of communication. Today they are superseded by other forms; the mass media have actually pushed them aside and undertaken that role. What is then the nature of the mass media today? Today we have electronic communication which is immaterial. There is increasingly more talk of immaterial value, immaterial money; we are talking of a faceless and nameless economy, and of invisible multinational companies.

How do all these fundamental changes affect art? The art of the post-industrial electronic era tends to become immaterial as well. We started from mild forms of immaterial art, such as Minimal and Conceptual art which acted indeed as an introduction. Today art might be just content with the piece of news or the transmission of the media that leave behind only the image: that is, the shadows of Plato's cave. There is no actual "corpus dedicti". The immaterial "corpus" is the one actually recorded by photography, video, or the Web.

Together with its material existence, art has done away with its original reason of existence, which was to overcome time and death. It has became instantaneous and consumable: instead of being inscribed in the memory, it is destined to be disposed of like all the news that goes through the mass media.

With globalization, art tends to lose one more essential quality: that is, its national identity. Marketing strategy has of course dictated in recent years a rhetoric propagation of local character. In reality, those local identities used to lose their character and, with the assistance of the mass media, they became models rapidly copied all around the world.

Globalization could also have supported the vain hope of the collapse of the frontiers of the free, two-way traffic of cultural goods. It could have made us believe in a worldwide democracy where everybody will have equal right of speech: that of culture. But none of this happened. On the contrary, models were created in impersonal and super-national centres and imposed worldwide. I dare to claim that we are running the risk of experiencing this paradox: the more electronic communication increases, the more our cultures and civilizations will be divided by frontiers. The already familiar cultural product will become more well-known, while the latent, the unknown and invisible, will sink into oblivion. Art thus runs the risk of being homogenized, clonified, multiplied and becoming a common universal language like an insipid international style with slight variations of consumer necessity, like the prét-à-porter.

What is then the antidote for these visible and imminent risks? First, awareness and education vis-à-vis risks. Second, a collective effort on the level of education, policy, and strategy within the framework of international organizations in order to promote on an international level those local diachronic and contemporary aspects of our culture which still exist. Third, the creation of institutions which will encourage and promote this kind of creation, not for chauvinist reasons, but in order to assist other people in their creative endeavours.

What I am trying to say is that getting to know each other is an act of enrichment and resistance to that homogenization, to that commercial plankton that threatens to flood the global village.

Finally, let me conclude with a proposal initiated by me but adopted by the Minister of Culture, Professor Evangelos Venizelos, who proposed it to Direction X of the EU; this is within the framework, the rationale of such a resistance to homogenization. We have proposed that in every Member State of the EU, one or more cultural centres should be created which will have a purely European orientation; we termed them as "Museums of Europe" since "museums" in antiquity were places of worship of all the muses. We do not simply mean a museum of fine arts. These museums would be in many European cities and would accept a continuous flow of cultural events from other countries.

The Greek Museums of Europe would then never show Greek art, Greek music and Greek culture in Greece; they would present the art of other European people. Greek culture would be exhibited in Belgium, Spain, France etc. and there we could have 2 or 3 months dedicated to each country. Each country would choose what it wishes to present; I do hope that they would aspire to present their most accomplished endeavours in all forms of art: theatre, cinema, poetry, literature, music and exhibitions. In a continuous flow of manifestations, you can understand the level and perspectives for getting to know each other better with time on an international level.

Such events would encompass a global culture which would include even food, local cuisine, local coffee and information. I imagine that these centres could also make good profit if they all charged an admission fee, if the products of the country were on sale there; they could then attract the interest of young audiences as well as stimulate our interest, our curiosity to discover each other. The Museums of Europe will be places of continuous discovery.

In order to make this proposal easier, we originally thought that one museum could actually dedicate two months of their annual programming in order to help

this project materialize at an experimental, pilot stage. We very soon came to the following conclusion: no museum was willing to allocate two months of their annual programme to this project because all museums, including the one I direct, will tend to adopt a business and profitable approach. I mean that, if a famous painter from Spain or Belgium who is unknown in Greece or France came over and exhibited his or her work in my museum, this could never attract the public. They might be famous in their country, but not in mine. For this reason I would be very reluctant to devote two months to such projects. They are not going to attract the public and help cover their cost. We may thus conclude that the Museum of Europe should be a special place dedicated only to this purpose; it could then become very important and raise profit, because people would go there to discover new things: the art of other countries.

The strongest countries have the illusion that other peripheral ones know them very well. This is a mistake. Unfortunately, some countries in the world prevail over others in the flow and traffic of cultural goods; I am afraid that after a while all European countries will sink into oblivion.

Our proposal was based on Article 128 of the Maastricht Treaty, according to which not only the local and national characteristics should be supported, but also cooperation with third nations, third peoples. I believe that these centres could become a place where the culture of the whole world might be promoted; this is the outcome of the deeper philosophy of the European Commission.

This is our proposal. Direction X has had a very positive response to it. It needs better organization and I believe that since it is not a proposal such as the Cultural Capital, or a programme such as Leonardo, Raphael etc., which actually have a definite timetable and a deadline, it could go on and become the deeper moral link between the European countries; it would indeed abolish the idea that we were only united in order to exchange goods and services and not to get to know each other better and to enrich ourselves as a result.

Thank you very much.

8.3 Cultural and Recreational Activities: New Challenges for Training Institutions
by Mr Adérito Alain Sanches

Mr Adérito Alain Sanches is Associate Professor at the University of Nice, France [8]

The rapid development of cultural activities observed in Europe during the past decade is expected to have significant effects on vocational training programmes and methods, as well as on institutional and national training strategies in the European Union countries. These effects, already noticeable, should become even more visible during the first decade of the 21st century.

History shows – and economic textbooks invariably remind us – that, as society and economy evolve, the basic structure of a country's workforce tends to undergo a *sui generis* transformation: due to progress in technology and to greater professionalism, both leading to higher productivity, less and less people are proportionally needed to work in the economic sectors that answer fundamental human needs like agriculture and fishing.

As a result of this natural "compression", a substantial part of the workforce is released. Consequently, a growing number of workers seek employment in other (more "sophisticated") economic areas. Many of them find jobs related to traditional or new activities in the so-called "second sector", such as manufacturing, or in the service sector. Then again, as productivity and performance increase, a similar phenomenon tends to contract the workforce employed in industry and in the more familiar service activities, releasing progressively new arms and heads for other tasks.

From another perspective (i.e. not from the production, but from the consumption standpoint), it may also be noticed that, once the more basic needs (food, shelter, physical security) are met for the majority of the population in a country, new personal and social needs tend to emerge (or to gain momentum), and a growing demand for more diversified products and services appears therefore in the market. This may be interpreted, from a psychological point of view, as a natural movement of a significant number of individuals in society to higher positions in Maslow's needs pyramid. Increasing income levels, allowing higher living standards, accentuate this trend by intensifying the overall demand.

8 In this summarized presentation, the more general introductory considerations regarding the definition of "culture" and "vocational training", as well as the final set of global recommendations, although regarded as critical, had to be skipped.

1 A new society based on services and information

The steady growth of the service sector

In well developed countries and regions, these combined phenomena have two important effects: they lead, on the one hand, to an increased and more diversified supply of products and services in the markets; and, on the other, to a characteristic evolution and stratification of their workforces. This latter consequence deserves special attention. Employment rates in the first and second sector seem to tend progressively to some sort of "limit values". Surprisingly enough, these values appear very similar, when comparable technologies are used in different but culturally related societies.

Employment average rates in 1997 show, for instance, that agriculture accounts now only for 2% of the working age population (WAP)[9] in the United States, and 3% in the European Union[10]. In industry, the corresponding parts are even closer: 17.7% in the United States of America and 17.8% in the EU. In the service sector, however, more significant differences occur: in the EU employment in services accounts for a little less than 40% (39.2%) of WAP, while in the United States the corresponding figure is already well over 50% (54.3%)[11].

Partly as a consequence of this "compression" of the workforce within the primary and secondary sectors, and partly as a result of the growing demand for extended, better and more diverse services, the tertiary sector tends to present a characteristic level of expansion and diversification in developed economies.

During the five decades that followed World War II, in the 15 countries that today constitute the European Union, the national workforces underwent a rapid and radical, albeit uneven, change[12]. In 1997, the average proportion of the workforce employed in the service sector in the European Union had reached two-thirds (65.6%). The corresponding value in the United States was even higher, approaching three-quarters (73.3%) of total employment.

A more detailed examination shows striking differences in the employment growth rates of the specific components (i.e. the distinct types of professional activities) that form these three very broad conventional sectors. An analysis of 35 aggregates of NACE 2-digit activity sectors, presented in the *European Commission 1997 Employment Report*, makes this very clear[13]. During the period 1990-1996[14], 24 of these aggregates (two out of three) showed negative average annual growth rates. Some of them – linked to mining and manufacturing – suffered from severe employment losses (with negative growth rates exceeding in some cases, in absolute value, -5%)[15]. The other 11 sectors benefited from positive growth rates, ranging from values close to zero to around 4%.

An increasing demand for knowledge and culture

Within the rapidly expanding broad service sector, some meaningful contrasts in the growth rates of its components may also be noticed. Among the most dynamic specific NACE service sectors we find clusters of activities strongly related to information and knowledge. Many of them require from their providers relatively high levels of expertise (such as business consultancy, education and health). Tourism and culture-related activities are also well represented among the fast-growing services.

In the previously alluded to *European Commission 1997 Employment Report* analysis, one of the aggregates exhibiting higher positive growth rates (ranking fourth during the period 1990-96, and second during the longer period 1986-1996) was NACE 2-digit sector 92: *recreational, cultural and sporting activities*[16] (activities listed in this category appear in the box). Its average growth rate was around 4% in 1986-90 and 2.5% during the period 1990-96. Compared to the

9 Population aged 15-64.

10 These are already very "compressed" values, characteristic of countries with highly developed agricultural procedures and techniques. In less industrialized regions of the world the corresponding estimated average values may be much higher. In 1990, in three of these regions – East Asia and Pacific, sub-Saharan Africa, and South Asia – they reached 70%, 68% and 64% respectively (The World Bank, *World Development Report 199*", viii-266 pages, p. 221).

11 Non-employed population accounts for 39.5% of WAP in the European Union, and 26.0% in the United States.

12 The decline observed in the percentage of the population working in agriculture may be more or less rapid, depending on the regions and the periods. In France (the first agricultural power in Europe), for instance, where the primary sector underwent a steady decline during the past two centuries, the movement was accentuated after the Second World War (during the so-called *trente glorieuses*, 1946-75): agriculture, which absorbed over 80% of the workforce at the end of the 18th century, accounted yet for nearly half (47%) of the workforce in 1866, 45% in 1911 and 38% in 1946, but then fell, more abruptly, to only 8.8% in 1980, and this figure was "compressed" to 6.4% in 1990 and 4.9% in 1995. Meanwhile, the services sector, which accounted only for 27.3% of employment in 1866, 28% in 1911, and around one third (34%) in 1946, increased swiftly to reach 55.3% in 1980, 63.2% in 1990 and over two-thirds of total employment (68.1%) in 1995.

13 European Commission, L'emploi en Europe 1997, European Communities, 142 pages.

14 This was a rather critical period for employment in Europe (see footnote number 19).

15 Two already very small NACE sectors showed even more impressive negative growth rates: sector 13: mining of metal ores (-22.8%); and sector 10: mining of coal and lignite / extraction of peat (around -12%). These, however, were extreme cases.

16 This single category had been considered as an aggregate for the sake of this analysis.

overall growth rate of employment, these are sound, impressive figures.[17]

O. Other community, social and personal service activities

...

92 Recreational, cultural and sporting activities

921 Motion picture and video activities
9211 – Motion picture and video production
9212 – Motion picture and video distribution
9213 – Motion picture projection

922 Radio and television activities
9220 – Radio and television activities

923 Other entertainment activities
9231 – Artistic and literary creation and interpretation
9232 – Operation of arts facilities
9233 – Fair and amusement park activities
9234 – Other entertainment activities

924 News agency activities
9240 – News agency activities

925 Library, archives, museums and other cultural activities
9251 – Library and archives activities
9252 – Museums activities and preservation of historical sites and buildings
9253 – Botanical and zoological gardens and nature reserves activities

926 Sporting activities
9261 – Operation of sports arenas and stadiums
9262 – Other sporting activities

927 Other recreational activities
9271 – Gambling and betting activities
9272 – Other recreational activities

Nomenclature of economic activities in the European Union
NACE 4 1993 – Rev. 1

The EC Report allows us also to have a clearer idea of the weight of this "cultural, recreational and sporting" sector in the current economy of the European Union countries. The employment weight of 36 aggregates of NACE 2-digit sectors (composed using the same methodology) was evaluated as a percentage of total employment in the European Union in 1996[18]. As it might be expected, the results show a great diversity of cases. However, three large groups of aggregates may be, in practice, distinguished according to their values. Sixteen of these aggregates each accounted for less than 1.5% of total employment. Fourteen of them, at the opposite end, each accounted for over 2%. In an intermediate position (with values comprising between 1.5 and 2%) we find six aggregates. Among them is NACE sector 92[19]. The significant weight of this vivid sector – which absorbs in Europe a workforce five times larger than research & development, and around 2.5 times larger than computing and data processing[20] – is even greater in the US economy[21,22].

2 New emerging needs

This rapid growth of a cluster of services that already offers employment to around 2.5 million Europeans (and creates annually, on a regular basis, several tens of thousands of new jobs) deserves, of course, special attention from the Community and from national vocational training systems and training institutions. It appears largely as a natural response to a series of new (lasting) needs that are emerging in, and establishing themselves as characteristic of, contemporary European society in these final years of our century (and millennium). These needs may be identified at, at least, three distinct complementary levels: the individual people; the organizations they work in (and, more broadly, the groups within which they live); the single countries that form Europe (and also, taken as a whole, the European Union itself).

Individual increased demands for knowledge and culture

Europeans are nowadays, on average, more keen to consume cultural services and to raise their cultural level for a series of convergent and weighty reasons. Their living conditions have seriously improved: their educational and income levels are significantly higher

17 In the period 1991-94, employment in the European Union went through a serious crisis (4.9 million jobs were lost). The overall employment annual growth rate fell from values close to 1.7-1.8% in 1988-1990 to 0.4% in 1991. Even worse, these rates became negative in the period 1992-94 (around -1.2% in 1992, -1.8% in 1993, -0.3% in 1994). The situation improved somehow in 1995 (0.7%) and 1996 (0.4%), but the corresponding growth rates remained modest (around 0.5%, i.e. five times less than the employment average growth rate observed in NACE sector 92 during the period 1990-96).

18 Twelve of these aggregates were combinations of more than one NACE 2-digit sectors, the other 24 corresponded to single sectors.

19 The other five sectors are: Post and Telecoms; Printing, Publishing and Paper; Wood and Furniture; Manufacture of Chemicals and Chemical Products; Manufacture of Motor Vehicles, Trailers and Semi-Trailers.

20 Both *Research & Development* and *Computing & Data Processing* are listed among the *Business Services* (another very dynamic sector).

21 In 1997, NACE category 92 accounted for 1.1% of the working-age population in the European Union, and for 1.9% in the United States.

22 In 1996, the estimated total population of the 15 European Union countries was around 373.2 million. The working-age population was 245.9 million (65.9% of the overall population). Total employment in the Union was 148.3 million (60.3% of WAP). The overall average employment growth rate was 0.4%. Employment within the NACE sector 92 accounted for around 1% of WAP in 1996 (1.1% in 1997).
In rough but more suggestive figures, we could say that, in 1996, within a characteristic random sample composed by 1.000 Europeans (from EU countries) belonging to the working-age population (aged 15-64), about 600 would be employed, 400 of which would be working in the service sector; among these, 10 would be engaged in activities listed in NACE sector 92.

than, let us say, in the middle of this century, and they also benefit, at present, from much more available free time. Moreover, they live in relatively rich environments that offer good opportunities and continuous stimulation for intellectual life and curiosity.

Region[23]	Mean years of schooling (age 25+) in 1992		
	Total	Male	Female
Sub-Saharan Africa	1.6	2.2	1.0
South Central Asia	2.5	3.5	1.3
Arab States	3.2	4.6	1.9
South East Asia / Oceania	4.8	5.7	4.1
Latin America / Caribbean	5.4	5.5	5.3
East Asia	5.7	6.9	4.5
Europe	9.8	10.0	9.6
North America	12.4	12.3	12.5
World	**4.9**	**5.8**	**4.1**

Table 1 General knowledge capital[24] evaluated by the mean number of years of schooling (population aged 25 years and over)

European citizens are among the persons who benefit from higher levels of education and instruction, and these levels are rising steadily. Table 1 shows the mean number of years of schooling of the population aged 25 years and over in different regions of the World in 1992. Only two well-developed countries – Canada and the United States – were included in the North America region, hence the high value displayed (12.4). The average value for Europe (9.8) was calculated taking into account 22 individual country values. Some European countries show, however, very similar numbers to those observed in the United States (12.4) and in Canada (12.2). This is the case, for instance, of Norway (12.1), France (12.0), the United Kingdom (11.7), Germany (11.6) and Switzerland (11.6). At any rate, the average value calculated for Europe was twice the corresponding overall figure for the whole world population.

Furthermore, European levels of education are rising quickly. This is shown by a series of significant statistical indicators. In the European Union countries, in 1993, 80.8% of the population aged 15-19, and 33.4% of those aged 20-24, were pursuing their education (general education or technical and vocational training). Three years later, in 1996, the corresponding figures had risen to 82.5% and 37% respectively (see Table 2)[25]. Young Europeans are benefiting from longer periods of basic (initial) education and training and, on average, their interest in culture and cultural activities is increasing as well[26].

Age	1993	1996
15 – 19 years	80.8%	82.5%
20 – 24 years	33.4%	37.0%

Table 2 Percentage of young people continuing their education/ training in the 15 countries forming the European Union in 1996

That is not all. Impressive improvements in income and in leisure time also deserve consideration. In many European countries, during the 30-year period 1965-94, there was a striking overall increase in the average household available income[27]. This is noteworthy, especially because this accumulation of wealth came after an already favourable period (1950-65)[28]. More money available usually means more consumption, with more diverse products and services asked for.

The gain in personal leisure time appears as another very remarkable improvement of the quality of life in the European countries, and as a landmark conquest of European society. Like the increase in household income, this is a consequence of a continuous rise in productivity. Four combined social trends are contributing, in practice, to a significant reduction (in proportional terms) in the individual's working time:

- life expectation is expanding;
- the number of working weeks in the year, as well as the number of working hours per week, have been, on the contrary, regularly decreasing;
- the conventional (legal) age for retirement tends, in many countries, to be reduced;
- finally, due to the lengthening of their initial education period, young people tend to enter later and later into the labour market.

The result of all these events (acting as convergent forces) is – especially from a long term perspective –

23 The composition of the different regions is the one adopted by UNESCO.

24 Source: UNESCO, *World Culture Report 1998*, 488 pages, p. 462 and 483.

25 These comparative values, extracted from a complete and suggestive chronological series, express a genuine increase in the percentage of young people receiving general or vocational instruction (in other words, they are not altered by the inclusion of Austria, Finland and Sweden in the European Union in 1995).

26 This, of course, progressively changes the competency profile of the working population. The situation observed in France may offer a good illustration of that. In the (relatively short) period 1982-90, the percentage of the population aged 15 and over in metropolitan France having no school certificate or diploma apart from the (primary level) *Certificat d'études* fell from 60.2% to 48.6%. Meanwhile, the percentage of those having reached the *Baccalauréat*, *Bac + 2*, and higher diploma levels rose, respectively, from 9.1% to 11.2%, 3.9% and 3.8% to 5.5% and 5.3%.

27 In France, during this period, the gross available household income more than doubled (it was multiplied by 2.3) and similar trends were observed in Germany, Italy and the United Kingdom.

28 The first two postwar decades progressively led to the establishment, in the more prosperous North American and European countries, of a "consumption society" (questioned by a part of the young population in the late sixties).

highly impressive. In France, for instance, one century ago, at a time when life expectation was only around 46 years, the average estimated lifespan working time rose to 200,000 hours; in 1996, however, in spite of a much longer life expectation (78 years, i.e. 32 years more), the corresponding working time had shrunk to 55,000 hours. When we more specifically consider the improvement in the estimated total average leisure time (within the wakening lifetime of a person), the figures are also highly significant: 2.1 life years leisure time in 1800, 3.2 years (1.5 times more) in 1900, and 15.8 years (about five times more than in 1900) in 1996. Now again, much more leisure time usually means more curiosity, a diversification of personal interests and, of course, in the end, an increased tendency to "move upwards" in Maslow's pyramid of needs.

The overall environment they live in, which offers many opportunities and continuous stimulation for intellectual life and curiosity, is also an important asset for European people, when cultural activities are being considered. Not only has Europe, in its many countries and regions, very rich and diverse cultural traditions, but it has, by far, the highest percentage of properties included in the World Heritage list as well[29]. Its cultural strength and influence is proven by an impressive series of indicators appearing in the *World Culture Report 1998* recently published by UNESCO[30]. And its inhabitants benefit nowadays from an extremely dense network of experienced and highly-diversified media.

The combination of all these favourable factors leads, on average, to greater receptiveness to, and higher interest in, cultural activities. There are also much more often contacts with the media (especially television)[31]. This new context contributes to stimulate the natural and ancient appetite of Europeans for information, knowledge and culture.

New needs within organizations

The effects of this increasing individual demand for cultural (and recreational) activities are being currently reinforced by a series of new concerns of a significant proportion of European companies and institutions. Four main reasons are encouraging many organizations in our continent to consider more attentively the needs for intensified cultural training of their managers and employees.

Firstly, it appears more and more clearly that a capacity of their workforce for rapid adaptation to frequently changing conditions is vital for the survival and for the sound development of contemporary organizations. Initial training must therefore aim at developing in the minds, above all, a robust capacity to learn quickly as well as a genuine concern for quality. Broad and solid general competencies, associated with individual creativity, generate a promising potential that is, rightfully, highly praised in today's organizations and groups (much more, as a rule, than specific abilities to carry out limited or highly selective tasks). Now, generic skills and creativity are, clearly, closely associated with levels of knowledge and culture on which they largely depend.

This growing need for higher "potential" in the workforce, associated with higher (and, what is more, constantly rising) levels of knowledge is today a well-established fact. Acknowledgement of that may be found, for instance, in the spreading of the new concept of "learning organizations". It is now, by and large, felt that setting up and increasing new workforce global intellectual capacities – the golden keys to adaptation, robustness and sustainable increase in productivity – should be a permanent concern of organization managers and political leaders, and that the responsibility to achieve this challenging task should be shared by the education and training system, on one side, and the organizations themselves, on the other.

Secondly, it appears also – and several recent studies carried out in different European countries (namely by CEDEFOP) have confirmed this in a very clear way – that relational and communication skills are more and more needed in contemporary organizations and in contemporary society. Teamwork and the development of the service sector have contributed to greatly intensify these needs. Now, as a rule, relational and communication competencies are significantly increased by higher levels of general knowledge and individual curiosity. The capacity and the desire to understand human relations, and the ability to effectively communicate, are in many ways stimulated and developed by personal culture. Cultivated minds, served by a sound sense of equity and respect for

29 Nearly half (49%) of the properties included in the 1997 tentative list of the world heritage properties (384 out of 790) were located in Europe.

30 Let us give here just two quick illustrations. Nearly 60% of the 142 most frequently translated authors in 1994 were Europeans. In 1992-95, Europe was number one for the number of foreign students (about 650,000, nearly half of the world total figure of 1,380,000), and for the number of students abroad as well (around 340,000 out of a world total of 1,250,000).

31 In France, for instance, where leisure activities are more and more diversified, and where interest in culture is increasing, the number of TV channels rose from 1 in 1970 to 3 in 1980, 26 in 1990, and 45 in 1996. In less than 30 years (1970-96), the time devoted to programmes by national hertzian channels was multiplied by around 8. The average time devoted to TV viewing by national households, which significantly increased in the period 1985-91 (by around one hour), was estimated in 1995 at 5 hours 10 minutes. Radio is also a praised medium. In 1995, an average, each French citizen devoted 3 hours and 13 minutes every day to radio listening (and around the same time to TV viewing). Furthermore, reading and music listening are quite popular. Together, during the same year (1995), the French bought some 305 million books and 144 million records and tapes; more than half (53.4%) of the population regularly read a daily newspaper (local or national), and a considerable proportion of them (95.5%) declared reading magazines, sporadically or on a regular basis.

others, have usually a better chance to develop good practices of social interaction and conviviality.

Moreover, culture became also an object for new concern because many organizations, facing the problem of better defining their identity (for the sake of their own staff, as well as for outsiders), are now wanting to set up in a more explicit way their fundamental values, standards and beliefs. And, of course, it is always easier to reflect critically and intelligently upon these values, and to try to improve them, when inner levels of culture are higher. Strengthening of social links within companies and institutions, and developing a sense of belonging to them, also request the organization of enlightened programmes of intrinsic cultural activities.

A third reason hiding behind the increasing demand for higher levels of knowledge and culture is linked to the expanding need of analytic and strategic competencies in organizations, and for methodological expertise to deal effectively with a broad variety of problems. Strategic and methodological capacities, and the ability to solve problems and understand complex situations, are now clearly overtaking, in many cases, more strict traditional technical skills. They require a combination of broad knowledge, analytical easiness and creativity, three critical psychological qualities developed by culture and stimulated by cultural interactions.

Finally, the multiplication of intercultural contacts and relations nowadays experienced, on a large scale, by European countries and organizations (induced, namely, by the construction and development of the European Union, and by the globalization of the world economy) also ends up requesting improved skills to deal effectively with intercultural transactions. As in the case of relational and communication skills, these "intercultural competencies" are closely dependent on individual and group levels of knowledge and culture.

Cultural policies within the EU

This greater interest in culture appears also at the country, and even at the European Union, level. Cultural and artistic education and training are acknowledged to develop sensibility, creativity and ingenuity, three important assets of national workforces in the modern world. They also contribute to a higher sense of national and regional cultural identity. Concerned both with the revitalization of their economies and the search for greater social solidarity, as well as with the respect for minorities and cultural diversity, many European governments are encouraging, in different ways, the development and the social extension of cultural activities.

Finally, the construction of a European citizenship – which has become, since 1993, an important concern of policy makers within the European Union – requires from European citizens a better acquaintance with their rich and amply-diversified cultural heritage. The impressive growing success of the *Journées du Patrimoine*, now organized in virtually all European countries, vouches for the fact that a large number of Europeans have felt and understood the need for sharing a feeling of having a common past and a common destiny.

3 Keeping up with a rapidly changing demand

Changes in these fast-growing cultural and recreational clusters of occupations, however, are not only quantitative. Cultural activities, in particular, as every knowledge-related job, are very closely connected, on one side, to communication methods, channels and technologies (this might be called the "technical" link) and, on the other, to management and interaction styles within organizations (the "social" link). Both of these critical connections underwent, as we know, rapid and deep transformations in recent years, and we are still experiencing the consequences of this technological and organizational mutation. In addition, cultural activities are also strongly affected by the hastened development of exchanges and links between countries (induced by globalization), as well as by changes in individual and group aesthetic demands and sensibilities (these changes occur now more often, due to the multiplication of the points of contact among different cultures and regions).

As a result of these and other factors (for instance, the development of government and local authority policies aimed at creating new jobs and new types of professional activities for young people), the profiles of skills and competencies required from those working in this rapidly moving area, as well as the new trades and jobs that are being created, show a high degree of diversity and change.

Still, as we have already noticed, individual abilities to establish good interpersonal relations and to communicate in an easy and effective way – as well as the capacity to understand and interact with persons from different cultural environments – are now being considered important basic competencies in many professional situations. This occurs not only within the NACE sector 92 cluster of activities, but also in a much larger universe of jobs and occupations. The same happens with individual and group capacities to innovate and solve problems in a creative way.

These changes should be regarded as a new challenge to today's European training institutions, and as an invitation for them to introduce, more frequently, well-balanced and well-integrated combinations of communication and culture-oriented training programmes.

9 Summaries of the Thematic Units

9.1 Vocational Education and Training and New Technologies

Given the different local, regional and national characteristics of each Member State of UNESCO's Europe region, the aim of the symposium is not to result in a single common policy on vocational education and training. The diversity and divergence which exist in relation to the characteristics that refer to technological, economic and social issues, lead us to express only general principles, commonly accepted by all, pertinent to the present and the future of vocational education and training in Europe.

The internationalisation of economic activity favours the development of new technologies, and simultaneously, new technologies favour the internationalisation of economic activity. This two-way phenomenon is relative to the continuous evolution and change of production and consumption patterns in contemporary societies, irrespective of the developmental level of each European region.

The integration of new technologies in the production process not only changed the phases of production and favoured capital/labour substitution, but also changed substantially the organisation of work and the qualification structures which are essential to employees.

New functions were introduced in the field of work as a result of the utilisation of technical know-how and the dissemination of new technologies. The hierarchical structure was simplified, responsibilities were assigned to more than one level, and the workers were invited to participate in more than one phase of the production process. Vocations either underwent substantial changes in their content, or disappeared. Simultaneously, new vocations emerged which required more knowledge and increased competencies. The contemporary employee, regardless of position, must possess more knowledge, skills and organisational capabilities than in the past.

On different occasions, taking into account the given weaknesses of the labour market, he runs the risk of becoming unemployed and thus faces the known threats that concern:

- the degradation of his living standard, and
- marginalization and social exclusion.

The efficiency of subsystems – vocational education and vocational training – is influenced by the degree of flexibility of each subsystem for swift adaptation and in-depth renewal. Both subsystems must be based on broader education, which will provide them with a solid basis of general education, so that the vocational character and orientation of each subsystem will be facilitated. While in the past the two subsystems of vocational education and training were distinguishable, nowadays the rapid technological changes and their continuous integration in production have made the boundaries between the two subsystems indiscernible. This is due to the fact that new technologies and the necessity to accumulate knowledge have rapidly imposed the quick adaptation and renewal of curricula.

In any case, it is necessary to define the vocational requirements in every sector of production, so as to enable young job-seekers and those already employed to respond to the requirements of the labour market and the modern production structures. They must attend vocational education and training whose curricula have been renewed and are modern. Hence the efficiency of vocational education and training is based on the linkage between the knowledge and competencies provision mechanism and the mechanism that detects the goods market and the labour market. The concept of partnership relationship (tripartite relationship: state, employers and employees) should underline the entire planning process of specialities, curricula and their subjects.

The process of continuous assessment and certification becomes even more necessary as new technologies are integrated in the production process. The training of trainers on new technologies endorses better knowledge transfer as well as improved development of trainees' competencies.

Given the interaction between the system of education/training and that of production, it is imperative to diagnose the necessary knowledge and competencies required in every sector of production in order to utilise in the best possible manner the absolute and comparative advantages of every European region. It is also imperative to assure a system of vocational mobility within and among the various sectors of production.

Simultaneously, new technologies have defined new operational frameworks regarding the function and effectiveness of vocational education and training. The use of new technologies (computers, multimedia, closed and open networks, the Internet, simulation software, etc.) for educational purposes has generated new conditions and prerequisites with regard to the future of vocational education and training. New forms such as distance learning, self-education and training, and on the job training constitute typical cases where new technologies are employed to assist the consolidation of knowledge and competencies and

establish contemporary professional qualifications. The ever increasing use of the new technologies in the processes of education and training not only overturns fundamental assumptions related to educational infrastructures (building infrastructures, educational material, laboratory equipment), but also formulates new preconditions by means of which the optimum cost of education and training is determined.

The above summary was compiled by Mr G. Sapountzoglou

9.2 Environmental Education and Training

At the UN Conference on "Environment and Development" ("Earth Summit") held in Rio de Janeiro in 1992, the 178 participating states agreed on the principle of sustainable development. One of the documents adopted was "Agenda 21", a "programme of action for the 21st century". In its chapters, "Agenda 21" contains detailed recommendations for action to implement this principle.

Economic management which complies with the principle of sustainability can be determined on the basis of three fundamental criteria which relate to the sustainability of products as well as to the methods and processes of production:

- *Renewal*: renewable natural resources such as timber or fish stocks must be exploited only within the limits of their capacity for long-term renewal. Otherwise they will be unavailable to future generations.
- *Substitution*: non-renewable natural resources such as groundwater and fossil fuels must be exploited only in the long term and to the extent that their utilisation is substituted with other materials or energy sources.
- *Adaptability*: the release of substances or energy must, in the long term, not be larger than the capacity of ecosystems to adapt – e.g. climate, forests and oceans.

After the Rio Conference, new institutional frameworks were developed for implementing the resolutions adopted (Commission on Sustainable Development – CSD, Scientific Advisory Boards, Local Agenda 21 Councils, etc.). These provided concrete support of measures implementing the sustainability principle as well as public awareness.

A heightened environmental awareness among the population combined with stricter government regulations has since resulted in the development of a significant market for environmental protection products. This market offers a growing number of jobs to competent staff. The integration of knowledge and skills relating to environmental protection in initial and continuing vocational training represents an important step towards maintaining efficiency and corporate competitiveness.

The global market for environmental protection products is regarded as a dynamic growth market and, according to OECD research, it has a volume of 430,000 million DM[32] in 1998. Concurrent forecasts predict further growth, ranging from 5% to 6% annually (OECD) and 7.5% (Environmental Technology Export Council of the USA), to 8% for the period 1995-2010 (Japan's Ministry of International Commerce and Industry – MITI). The increase in employment in environmental protection is more pronounced than in other sectors of economy. New jobs are being created.

Consequently, corporate policies through which companies and their workforce implement environmental protection measures on their own initiative reflect a modern, far-sighted environmental regard. Efficient environmental policies, which integrate the vocational training of all members of the workforce, lead to the creation of a series of economic advantages, e.g. the reduction of expenditure for water consumption and other resources, the economically feasible collection and utilisation of wastes, as well as the reuse of packaging materials.

The constant improvement and reform of production structures are essential processes for ecology-geared companies. The provision of corresponding training to all members of the workforce, from the level of the skilled worker to the level of the administrative personnel, is a key factor so as to make this continuous process of improvement feasible.

Within this framework, knowledge and competencies related to environmental protection become quality factors. These factors determine the workforce demand. Furthermore, training personnel play a major role in the development of environmentally sound training programmes. Therefore, the training personnel must have the necessary competencies.

Despite the fact that much effort has already been made, and the necessity for the development of environmentally-friendly production methods has been recognised, it is commonly accepted that there is still further ground to be covered. This is especially relevant to the need for integration of environmental education and training modules into vocational education and training programmes, as well as to the institutionalisation of these practices in corporations.

In this context, there is a clear need for taking remedial action coordinated by international organisations and their Member States.

32 ca. 250 million US$

Within the framework of implementation of Agenda 21 measures, the main initiatives that must be taken are:

- Research on the elaboration and management of organisational structures relating to the implementation of environmental education and training.
- Promotion of activities for the development of an action programme whose aim will be to provoke dialogue on the 'green tax' (e.g. CO_2 tax). Under circumstances that assure competitiveness of Member States' economies and 'commercial stipulations', such a tax could accumulate funds in order to finance a series of actions to promote and support environment-oriented policies.
- Selection of key sectors of economic activity for the implementation of pilot environmental policy programmes. These pilot programmes could take place in:
  - the primary sector (agriculture, fishery, forests);
  - the construction industry (ecological building techniques);
  - plumbing, heating and air conditioning (ecological technical services management);
  - automobile manufacturing;
  - electricity generation;
  - industrial metalworking (maintenance and recycling);
  - commercial services (environment-oriented communication);
  - tourism (ecological tourism).
- Establishment and operation of initial and continuing vocational training systems which will ensure the best possible efficiency. The efficiency criterion can be ensured through suitable decision-making and implementation. In this case, the role of environmental consultants is considered vital.
- Small and medium-sized enterprises are of particular importance.
- Development of curricula in which environmental education and training takes into consideration the content of related scientific disciplines (criterion of multi-disciplinarity). The objective is the 'greening' of curricula with the integration of relevant environmentally-oriented subject matter and educational material.
- Co-ordination and synergy among various types of initiatives introduced by international organisations in the field of environmental education and training (e.g. the OECD schools network, the UNESCO Associated Schools Programme, European Union Programmes, LEONARDO).
- The development of monitoring and evaluation mechanisms to control the efficiency and to adjust potential faults as a result of the implementation of the above recommendations.
- Creation of a transparent system to certify professional competencies in initial and continuing vocational training which will assure the acquisition of knowledge and skills in the field of the environment.

The promotion of dialogue is essential in order to design and implement an action plan within UNEVOC's work plan, which will focus on issues related to the environment in initial and continuing vocational training.

The above summary was compiled by Mr M. Hartel

9.3 The Changing Role of the Public and Private Sectors in Vocational Education and Training

A content analysis of the presentations demonstrated the emergence of a broad consensus regarding the role of the public and private sector in vocational education and training.

Furthermore, the overall debate emphasised the need for complementarity between the public and private sector for the development of an efficient vocational education and training system. Mr Hillenkamp mentioned that there is a need for redistribution of the role and responsibilities of social partners in the provision of vocational education and training. He argued that the public sector should focus on the provision of initial education and training, while the private sector should concentrate on skills development at the workplace.

The above role and responsibilities of the public and private sectors are outlined in the following sections:

The role of the public sector in vocational education and training

- The public sector has a major role to play in vocational education and training.
- The public sector must address critical issues relating to social inclusion and exclusion.
- The public sector is responsible for the development of policies which meet future social and personal needs. It is responsible for the provision of a coherent system having the capacity to assure quality standards.
- The public sector must play a major role in lifelong learning. More specifically, it must develop initiatives, facilitate, guide and counsel on issues of lifelong learning and training.
- The public sector must ensure that the workforce is provided with contemporary and specialised employability skills.
- The public sector must establish goals for various vocational education and training systems.
- The public sector must be responsible for the growth of vocational education and training schools as well as for the training of vocational education and training trainers.
- The public sector must assure the vital interests of society, the right of equal access to vocational edu-

cation and training, and evaluations based on accountable data.
- The public sector must consider the changing economic conditions and, consequently, adapt its policies.
- The public sector must reflect on innovations which relate to vocational education and training policy.
- The public sector must care for the development of core skills.
- The public sector must act as a catalyst for the promotion of social and economic development.
- The public sector must reinforce the links between vocational education and training institutions.

The role of the private sector in vocational education and training

- The private sector must monitor and anticipate the labour market.
- The private sector must assist the public sector to formulate specific goals for vocational education and training.
- The private sector must establish complementary vocational education and training programs.
- The private sector ought to co-finance vocational education and training.

Shared roles between the public and private sectors in vocational education and training

- Responsiveness for monitoring and managing technological, economic and labour market changes.
- Assurance of adequate preparation of the workforce which should have the capacity to adapt.
- Responsibility for the improvement of employability and competitiveness.
- Responsibility for securing social inclusion and combating social exclusion.
- Creation of an environment favourable to innovation.
- Definition of professions.
- Assurance of smooth transition from school to work

According to Mr Petrov's presentation, three tendencies could be identified in relation to the financing of vocational education and training programmes.
- The first has to do with the current tendency for reduced contribution of state funds for vocational education and training.
- The second has to do with the resistance of employers to allocate funds for training during times of economic recession.
- The third has to do with the inclination of individuals to invest less in training when their incomes decline.

Thus, the major question emerging is, who should pay for vocational education and training programmes.

Results of a study conducted by ILO on vocational education and training financing practices in various countries provide us with an understanding of issues regarding decision making as well as financing and allocation of resources to vocational education and training.

According to that study, the three partners, who are the state (which can be the main contributor), the employers and the trainees, can assume vocational education and training financing.

A number of speakers complemented the above proposal with further elaboration on state-funding strategies, such as:
- Traditional budgeting management in connection with depreciation of funds;
- Use of vocational education and training financing as a management tool;
- Use of vocational education and training financing as an investment asset.

Two additional elements that relate to the distribution of resources and funding techniques have to do either with the operation of a formal funding system or with the operation of a system where the allocation of funds depends on the achievement of already established goals. This second technique is based on the assumption that both, the vocational education and training administration system and that of funds management, are based on evaluation mechanisms, which, in turn, are based on accountable data and enhanced responsiveness.

Based on analyses of experiences drawn from various countries, such as Germany, the United Kingdom of Great Britain and Northern Ireland, Denmark, France, Ireland, Belgium, the Netherlands, Switzerland, Finland and Sweden, Mr Petrov identified an "institutional/management tool" that could help every government in strategic planning and mobilisation of resources with an aim to channel them through training providers.

Mr Benedek presented four critical elements which must be considered regarding the interaction between the public and private sectors. These were:
- Who is responsible and what are the specific responsibilities?
- Which are the conditions for the successful attainment of goals?
- Who competes, and what does he compete against?
- Who benefits, and from what?

Mr Benedek also identified four factors which define the relationship between the public and private sectors in the area of vocational education and training programmes financing. These were:
- The employment field focused on supply and demand;

- The legislative mandate for the provision of a legal framework for the certification of knowledge and competencies, quality assurance, and co-operation among social partners;
- The financing of vocational education and training programmes in cases where there is transition to the market economy;
- An appropriate communication system between social partners to facilitate the balance of various interests.

Mr Benedek also described the new legislative framework enacted by the Hungarian legislature in 1993 with an aim to govern vocational education and training.

Guiding Principles

The following guiding principles were derived from the analysis of presentations made combined with audience reactions:

- Vocational education and training should be viewed as a productive investment rather than an expense. And this is because it has a productive content and meaning.
- Vocational education and training requires global approach and local action. Simultaneously, it is necessary to decentralise resources and responsibilities at the local level.
- Education and training constitute important parameters of long-term economic policy. This is true mainly when economies are based on knowledge and when the production process makes the need for knowledge imperative.
- General frameworks, tradition, culture, and the modernisation process influence the role of social partners. Therefore, a solution reflecting a single uniform policy does not exist and it is not desired.
- The citizen holds a responsibility to participate in his retraining in the context of lifelong learning.

The above summary was compiled by Mr Ch. Chinien

9.4 Internationalization of Economic Activities and Tourism

The internationalisation of economic activity has lead to a constant and spectacular growth within the tourism sector. The tourist industry allows for the development of small and medium-sized enterprises, and consequently for job creation, thus raising the standard of living.

Within this framework, participants formulated recommendations addressed to the following actors:

- People in charge of training;
- Professionals involved in the planning of tourism policy;
- Business managers.

Vocational training

Given the economic importance of the tourism industry, the already existing or potential recipient countries must implement training policies for initial and continuing training aimed at developing professionalism in accordance with the new and diversified forms of tourism.

It is recommended, among other things, to incorporate the following aspects in the training curricula:

- Specialised tourism (conferences, health, culture, ecology, sports, etc.)
- The introduction of new technologies causing a shift of essential competencies towards communication and interaction.
- Apart from linguistic skills, knowledge of 'other cultures' will allow the enrichment of knowledge and mutual understanding.
- Information on undesirable effects and consequences of tourism (sex, deviant behaviour, etc.).
- The development of cultural identity as an asset of tourism.
- The necessity to take into consideration the factor 'defence of the environment' when exploiting local resources.
- Training actions should be based on diversified pedagogical strategies, such as alternation of places and actors playing a role in training, coaching and advice, being applied to the needs of small enterprises.

Training should also develop entrepreneurial competencies. The entrepreneurial spirit, however, should be introduced in the early stages of training.

Initial training should take into account the vertical and horizontal mobility of the workforce in order to facilitate professional advancement on the one hand and work mobility on the other.

Tourism planning policy

The symposium participants formulated recommendations for the persons in charge of tourism planning, especially in developing countries:

- Tourism planning should benefit the country in terms of:
  - job creation, and
  - good management of local resources
- Tourism development must be balanced and well integrated with national, regional and local planning strategies.

Enterprises

Finally, it is important that enterprises, especially small and medium-sized enterprises, develop national and transnational strategies for cooperation in order to cope successfully with the increasing global competition.

The above summary was compiled by Ms C. Arnold

9.5 Non-Commercial Exchanges and Vocational Training

Culture is a highly dynamic sector in Europe and other parts of the world. It is recognised as a sector able to provide opportunities for work to creators and young people and enhancing, simultaneously, social cohesion.

A quick quantitative analysis shows that:

- In the European Union, in 1996, the professional activities included in category 92 of NACE (Recreational, Cultural and Sport Activities)[33] represented between 1.5% and 2% of total employment (around 2.5 million people). This rate was five times greater than the employment rate in the area of research and development. The above sector is one of the fastest growing in Europe. In the period 1986-90, its rate of growth was 2.5% (at the same time the overall employment growth rate in the European Union was only around 1.2%). Even in the critical period 1990-94, during which employment in Europe decreased by 4.9 million units, the above sector displayed a remarkably steady growth. In the period 1990-96, its average rate growth was around 4%.
- This rapid development of cultural and recreational activities is supported by a number of favourable conditions. Among them, the following must be emphasised:
  - much more leisure time for individuals,
  - better living standards,
  - schools of higher standard and
  - increased opportunities given for participation in cultural events.
- Even if recreation and sports have a big share, culture, per se, is a dynamic sector as presented in the European Union study SEC (98) 837, published in 1998. It should be stressed that the development of cultural activities is fostered by a stronger demand by institutions and enterprises which work differently (i.e. with different structures of organisation and utilisation reward) in a much wider and multicultural environment. On the basis of this analysis, it is proposed to include culture as a separate module in vocational education and training. Culture establishes a close relationship with education, functioning as a vision for alternative and self-sustainable development.

The special issues to be considered for creating a system of cultural education and training are:

- Qualitative analysis of work (desktop, use of available data) and its expected trends (globally and at regional level).
- Similarities that can constitute a basis of curriculum development responding to priorities which give a competitive advantage.
- Potential cumulative effects of the linking of culture with alternative forms of tourism, which foster plans for cultural heritage protection and create extra added value for tourism.
- Consensus for the traditions within the different civilisations, in order to preserve their values and support a 'multicultural world'.

Within this framework, vocational education and training in the area of culture should lead to:

- A master plan for concept clarification, along main axes of development, in legal regulations, etc., reflecting a concern for reinforcing at all levels the institutional capacity to react in a timely and efficient way to the ever-changing environment;
- Concise action plans that will develop statutes, procedures and deliverables (they could be introduced as a pilot phase in the beginning).

Vocational education and training concerning culture could follow a realistic way in order to respond to specific needs and operate cumulatively with other contemporary programmes or projects.

The above summary was compiled by Mr F. Dracodaidis

33 cf. page 81

10 Closing

10.1 The United Nations Educational, Scientific and Cultural Organization
Mr A. Parsuramen

Mr A. Parsuramen is Director of the Division for the Renovation of Secondary and Vocational Education at the United Nations Educational, Scientific and Cultural Organization (UNESCO)

Distinguished Participants,
Ladies and Gentlemen,

We have now reached the end of our symposium, at least the official part of it. I will make a very brief evaluation of the outcome of our symposium and give you an idea of the follow-up action we envisaged.

I am sure that all of us are aware of the goals that we set for the symposium. One goal was to exchange views and discuss our perceptions of the challenges to technical and vocational education in the early years of the 21st century. After the symposium, I am sure all of us realise that to a great extent this goal has been achieved. I would like especially to thank all the distinguished key speakers and the participants from the countries in the region for their remarkable contributions.

The second goal of the symposium was to provide an occasion for participants from the countries in the region that share a common concern to meet and have an exchange of views and to develop partnerships. They have exchanged experiences on how they frame policies, define strategies and implement them in accordance with their needs and resources; how they develop programmes and curricula for TVE designed for young people and adults, in order to enable them to acquire the knowledge and know-how that are essential to economic and social development, as well as to the personal and cultural fulfilment of the individual in society. We have evidence that the symposium has enabled effective networking.

The third goal that we at UNESCO had was the expectation that that this symposium could guide us in the planning of the second International World Congress on TVE, to be held in Seoul in April 1999, and in the drafting of the UNESCO long term programme on TVE. This goal has to a large extent been met.

Here I would like to take this opportunity to express our appreciation to the President of OEEK and to the Greek authorities. They had the brilliant idea of introducing three additional themes, environment, tourism and culture for reflection and debate during the symposium. You deserve all our appreciation for that initiative, because this proposal has further enriched our deliberations and helped to draw attention to the importance and relevance of these themes in the development of national TVE strategy.

As regards culture we have talked about its potential as a provider of employment, but we need also to recognise its role as a very powerful instrument for social development, for peace and stability. Culture has that great force. We are all nations of diversities and the policy that should guide us (this is what guided us in my country, Mauritius) is unity in diversity. That is very critical, very important, if we want to ensure peace, stability, economic and social development.

I hope that the themes of culture, environment and tourism will be given their due consideration in the deliberations of the Seoul Congress.

The other goal which is equally important for us at UNESCO, and for me as the new Director of the Division of Technical and Vocational Education, is the building of partnerships. We will not succeed in development by doing things alone. We need to be in partnerships and thereby promoting synergy. In this context I would like to start first of all by expressing our deep gratitude to the Greek authorities for their very valuable contribution in organising this symposium. I would also like to mention the support we had from ILO, from the European Union, the European Training Foundation, and the European Centre for Development of Vocational Education. I would also like to convey to the distinguished participants our sincere appreciation for the efforts they have made to ensure the success of our symposium.

I wish also to pay special tribute to Mr Arsenis, the Minister of Education and Religious Affairs, for the great vision that he has not only for his country, but also for the world. Mr Arsenis is deeply committed to ensuring that Greece plays an important role in international development. He affirmed that Greece is prepared to share the experiences it acquired over the years with less developed countries not only in the Mediterranean and extended European region, but also in the African region.

As regards follow-up to the symposium, UNESCO will work closely with the organisers, and edit and print the reports which will be circulated to all of you.

I wish to inform you that, as part of the preparatory meeting for the Seoul Congress on Technical and Vocational Education, we are organising next month the regional conference on TVE in Abu Dhabi for the Arab States. I am pleased that Mr Sapountzoglou has kindly responded to our invitation to participate in the

conference and share the experience of the European TVE Symposium with our colleagues in the Arab States Region. There will be two other regional conferences: one in Kenya for the African region and the other one in Ecuador for the Latin American region.

Well, I would like very briefly to refer to the role of UNESCO in international development. Our Director General always emphasises that UNESCO is an IGO which is there to serve its members. We are all members of this great family called UNESCO. We consider, in the Secretariat, that it is our duty to facilitate cooperation and communication as we did in this symposium. We also give great importance to listening to our Member States to know their needs and expectations so that we may best respond to them.

I would now like to conclude by expressing thanks first of all to the Minister of Education, Mr Arsenis, for all his support and his valuable contribution, and to Mr Sapountzoglou, the president of OEEK, and to all his staff who contributed so effectively to the success of our symposium. I would also like to thank the Vice-President, Mr Papakonstantinou, for his contribution and support.

Allow me to mention the remarkable contribution of three of the OEEK staff, Mrs Maratou, Mr Tsolakidis and Mr Tselepis, and to associate all OEEK staff with this gratitude for their support in making this symposium a success.

OEEK, which is our Greek UNEVOC Centre, has given us an example of an outstanding contribution to the strengthening of the UNEVOC network in the European Region. My colleague, Mr Hans Krönner, and I felt, that as a gesture of recognition for the valuable work of OEEK we will present to the President a UNEVOC banner.

[Mr Parsuramen and Mr Krönner present to Mr Sapountzoglou a UNEVOC banner.]

Let me also thank all those who have made our stay at Kalimera Kriti Hotel such a pleasant one. The staff of the hotel has indeed given us an impressive demonstration of what good vocational education in Greece, in the tourism sector, is about. I am sure we carry very interesting memories and lessons from this experience.

I wish to thank the distinguished speakers and all the participants for their valuable contribution to the deliberations of the symposium.

I believe it is also my duty to thank my colleagues from UNESCO, Mr Tang, Chief of the Section for Technical and Vocational Education at UNESCO in Paris, Mr Hans Krönner, Chief of the UNEVOC Implementation Unit in Berlin, who has really dedicated himself to this Symposium, and Mrs Leonor Giarratano-Pardo and Mrs Patricia Toigo who managed the UNESCO exhibition.

Last but not the least, my thanks to Ms Sabine from the UNEVOC Implementation Unit in Berlin, who has not only efficiently managed the UNEVOC exhibition, but has been a source of information and advice on the worldwide UNEVOC Network. Thank you, Sabine.

Let me conclude finally by referring to what Mr Chris Chinien from UNEVOC Canada, a compatriot of mine, said. Our Greek hosts took great care of us when we landed at the airport, brought us to the beautiful island of Crete and gave us a really wonderful hospitality. I am sure that all of us, in addition to taking back the fruitful results of this symposium, will also carry very happy memories back home.

Thank you very much, once again.

10.2 Organisation for Vocational Education and Training
Mr Gerassimos Sapountzoglou

Mr Gerassimos Sapountzoglou is President of the Greek Organization for Vocational Education and Training (OEEK)

Ladies and Gentlemen,

It is not a figure of speech to say that we are actually moved here on the presiding panel by the marvellous words addressed to us by Mr Parsuramen, a dear friend of our country. I thank him once again. I would also like to express our gratitude for the distinct honour of proclaiming OEEK as a UNEVOC Centre.

I would also like to express my gratitude to the colleagues from UNESCO, to Mr Tang, to Mr Krönner, the Head of UNESCO-UNEVOC Berlin, and to Mrs Sabine Künnemann, as well as to the kind ladies who came from Paris to operate the stand that distributed UNESCO's splendid materials.

Furthermore, I would like to thank you all for your participation in this event, either as speakers or as participants.

I would also like to express my warmest thanks to all representatives of the international organisations that have participated; that is, of CEDEFOP, ETF and ILO, not only for their contribution towards the achievement of the symposium goals, but also for the information support provided to us and the public through the stands that were operating in the adjoining room.

The representatives of the mass media and the agencies who were present in this hall during the last few days

will not forget that it was here that they found all the issues and information regarding the future of vocational education and training.

Finally, I would like to express my warmest thanks to all the distinguished guests who were present at this event, and I would also like to affirm my love and thanks to all my colleagues, to OEEK which supported this effort which Ioannis and myself undertook a few months ago and brought to completion today.

A big thanks from me and my colleagues to all of you. I hope we see each other in Seoul, Korea.

We can now rest for a while, and then meet for dinner, with a chance to listen to another speech, that of the Vice-Minister of Finance of Greece, Mr Nikos Christodoulakis, who will speak about the educational systems and the development process. We will then enjoy ourselves.

11 Annex

11.1 Programme

Tuesday 22 September 1998

13:00 - 19:00	Arrival and Registration
16:00 - 19:00	**Meeting of Participants from UNEVOC Centres**
21:00	Dinner

Wednesday 23 September 1998

09:00 - 10:00	Registration
10:00 - 11:30	Official Opening of the Symposium
11:30 - 12:00	Break
12:00 - 12:30	Presentation of the Hellenic version of the book "UNESCO: 50 Years for Education"
12:30 - 13:00	Introduction of Thematic Unit A: **Vocational Education and Training and New Technologies**
13:00 - 13:30	Theme A 1: The new international economic environment
13:30 - 16:00	Lunch
16:00 - 16:40	Theme A 2: New technologies and the production process: Changing patterns of production and the need for effective vocational education and training
16:40 - 17:00	Theme A 3: New technologies – vocational education and training: Utilisation of new technologies in vocational education and training
17:00 - 17:15	Break
17:15 - 18:00	Discussion
18:00 - 19:00	Working Group on Conclusions
21:00	Welcome Dinner

Thursday 24 September 1998

09:30 - 10:00	Introduction of Thematic Unit B: **Environmental Education and Training**
10:00 - 10:20	Theme B 1: Environmental policies and production activity
10:20 - 11:00	Theme B 2: Environmental issues in vocational education and training
11:00 - 11:30	Discussion
11:30 - 12:00	Break
12:00 - 12:30	Introduction of Thematic Unit C: **The Changing Role of the Public and Private Sectors in Vocational Education and Training**
12:30 - 13:00	Theme C 1: The role of the public sector in vocational education and training systems
13:00 - 13:30	Theme C 2: The complementarity of the public and the private sector
13:30 - 15:30	Lunch
15:30 - 16:30	Theme C 3: Financing issues of vocational education and training
16:30 - 17:00	Break
17:00 - 18:00	Discussion
18:00 - 19:00	Working Group on Conclusions
21:00	Dinner

Friday 25 September 1998

09:00 - 09:30	Introduction of Thematic Unit D: **Internationalisation of Economic Activities and Tourism**
09:30 - 10:00	Theme D 1: Internationalisation and professional mobility
10:00 - 10:40	Theme D 2: Internationalisation and professional tourism: Vocational training responds to the new needs of the tourism sector
10:40 - 11:00	Discussion
11:00 - 11:30	Break
11:30 - 12:00	Introduction of Thematic Unit E: **Non-Commercial Exchanges and Vocational Training**
12:30 - 13:00	Theme E 1: Globalisation and non-commercial exchanges
13:00 - 13:30	Theme E 2: Cultural activities and vocational training
13:30 - 14:00	Discussion
14:00 - 16:00	Lunch
16:00 - 17:30	Conclusions
17:30 - 18:00	Symposium Closing
18:00 - 19:00	Working Group on Conclusions
21:00	Gala Dinner

Saturday 26 September 1998

Cultural programme: Visit to archaeological sites

Sunday 27 September 1998

Departure

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11.3 Technical and Vocational Education in Cyprus
by Mr Likourgos Kappas

Mr Likourgos Kappas is Minister of Education and Cultural Affairs of Cyprus. At the occasion of the Symposium, he presented the following proposal for the redesigning, restructuring and modernization of the public secondary technical and vocational education in Cyprus

Introduction

"God has blessed us with the nature and the capacity as human beings to add to nature. Whatever God has not provided, whatever is made by human beings, this is technology. And God has not provided us with everything because he wanted us to be productive".

The social, cultural and economic realities and demands of each society specify its educational priorities and perspectives.

In the process of formulating and drawing the educational policy of each country, the realities and demands that were mentioned before cannot be ignored.

Cyprus, in the years to come, is invited to make the transition from the industrial to the post-industrial era, and achieve, to the highest degree, the harmonization of the Cypriot society with the developments in the various Member States of the European Union.

The economy of Cyprus, which until 1974 was to a great extent based on the agricultural sector, after 1975 was forced to turn into industrial development and the development of services, with the future orientation of exploiting all the possibilities provided by the new technology. This fast change that occurred in the economy of Cyprus generated, among other things, changes both quantitative and qualitative as far as the demand in the workforce was concerned.

The life quality in a country is directly related to the degree its citizens understand and effectively use the existing technology, as well as to the degree new technology is being creatively developed, while (along with understanding and use) fundamental scientific, economic, social and ecological aspects of the issue are being taken into consideration. The teaching and study of technological issues, attitudes and skills must be planned and applied as a progressive follow-up, which will be expanded through all levels of the educational system (from primary school up to Lyceum and further) as an integral part of both an initiative providing "education for all" and a more specialized education.

In the European Community, the integration of the single market will be exploited by those Member States and companies whose workforces possess professional knowledge and skills to the highest possible degree combined with the appropriate skills concerning entrepreneurship and management technology which is being rapidly developed. The relationship between training and education and industrial competitiveness is direct and vital.

The most basic innovations which are planned for the Secondary Technical and Vocational Education (STVE) in Cyprus

The fundamental pursuit of the Educational System of Cyprus is:

- to guarantee the value and integrity of the individual
- to guarantee the survival of the individual
- to provide such assistance that the individual will be able to adapt and readapt him/herself in a continuously changing society.

The Ministry of Education and Cultural Affairs, having taken into consideration the challenges of our times, has formulated the general framework with viewpoints and presentations for redesigning, restructuring and modernizing the content and the structure of Secondary Technical and Vocational Education in Cyprus.
With our proposal for redesigning, restructuring and modernizing the content and the structure of Secondary Technical and Vocational Education, we are aiming towards:

- the improvement of the appeal and status of Technical and Vocational Education, industry and the labour market
- the promotion of exchanges and experiences concerning the systems of Technical and Vocational Education with other countries.

The most fundamental innovations proposed within the framework of our effort for redesigning, restructuring and modernizing STVE are:

1 Restructuring our educational system

What is proposed is the restructuring of our educational system so that the education of people becomes a lifelong process which will not be restricted to education at school, but will be extended throughout their lifetime in order to keep individuals updated and help to develop their skills in order to cope successfully with the demands of a changing society and contribute to its progress in a creative way.

2 Development of new programmes

The potential and rate of development of the Cypriot economy impose the need for a wide range of professions in the various sectors of economic activity, provided by STVE, which will mostly respond to the

current and growing needs of our society. The objective of the new Analytical Programmes will be preparing the workforce so that they can act creatively within a workplace framework which, through technological and productive processes, is changed and broadened utilizing the achievements of human knowledge.

The challenges of our times impose the provision of programmes that appeal to all ages. Special emphasis will be given to lifelong education and training.

3 The content of the new analytical programmes

The content of the new Analytical Programmes should:

- Provide suitable opportunities for research and creativity, develop critical and creative thought as well as human mentality, and provide a large number of motives for the development of skills.
- Recognize the prudent and flexible human abilities; develop the multiple approach towards problem solving; promote the fulfilment of learners' expectancies and needs; develop their self-esteem and help them obtain positive attitudes towards themselves by feeling proud of their achievements.
- Prepare trainees for life, survival and prevention.
- Help students to acquire a positive attitude towards productive work and employees, and promote the development of cooperation and the undertaking of responsibility as well.
- Correlate knowledge with reality, promote the development of technological literacy and the growth of technological thought and action while, at the same time, develop social conduct, education for democracy, coexistence, peace, tolerance and mutual respect.

Finally, the new Analytical Programmes should be characterized by flexibility and appeal without being burdened with an unnecessary quantity of knowledge, and they should prepare individuals for lifelong learning.

4 New subjects in SVTE programmes

In parallel to the familiar established subjects, the introduction of new ones is being programmed in such a way that they can respond to the updated educational ambitions of young people and to the general needs of students for cultural, socio-economical and scientific-technological development. Such subjects are the following ones:

- Commercial and Economic Sciences
- Ecology-Environment
- Problems of Society and Individuals
- Modern Technology – Computer Science and Computers

The contribution of these new subjects must not be strictly restricted to providing the student with useful knowledge for a more complete understanding of life in human societies and the natural world. Beyond this, the effort and work towards their acquisition should motivate mental and intellectual abilities and lead the individual to deeper thinking.

Especially, as far as modern technology is concerned, there will be an introduction to the education and training of students in the following sector:

Educational models of modern technology

The orientations of our industry towards the introduction of a new technology impose the practice and further training on a large group of workforce in the following sectors:

- Pneumatics
- Electro-Pneumatics
- Programmable Logic Controllers PLCs
- Computer Numerically Controlled Machine Tools-CNC Machine Tools
- Computer Aided Manufacturing – CAM
- Robotics

Computer Science – Computers

In the STVE Programmes, the introduction of the above subject is being programmed.

The aim of this subject is to bring the student into contact with the computer and its use, so that he/she can use it as a tool in his speciality and as a means of learning, and particularly to familiarize the student with the computer to the degree that he/she can use it in his/her every day life. In this way, the student will be prepared so as to integrate him/herself harmonously in a society which is more and more influenced by the modern technology of computers and computer science.

5 Upgrading of apprenticeship

The reforming of the institution of apprenticeship is about to take place so as to function as a collaboration programme between the Ministry of Education and Cultural Affairs, the Industrial Training Centre of Cyprus, industry and the small-sized enterprises in training schools.

The duration of training in institutions and enterprises will vary depending on the student's choices. In these programmes, basic general and vocational education and training will be provided concerning technical and non-technical professions.

The programmes will be flexible and will cover a wide range of skills in technical and non-technical professions wherein certain needs for employment in the labour market are detected.

6 Further training of the educational staff of STVE

The need for continuous knowledge renewal, in such a way that the possibility of evaluating the new trends and developments in the sectors of education, economy, society and technology is provided, imposes the systematic development of the teaching staff.
In order to achieve this, we propose the introduction of a plan for the further-training of teachers of STVE by means of scholarships, exchanges with other countries, and also by means of the pedagogical institute, schools and industry.

7 The development of cooperation among STVE, industry and small-sized enterprises

Having taken into consideration the new socio-economic standards and the new scientific-technological developments, an effort should be made for the further development of cooperation among STVE, industry and small-sized enterprises. Additionally, special efforts should be made so that collaboration programmes will be organized in common. These programmes should be organized for specific specialities in STVE, since the necessary equipment for the students' training in these specialities is much too expensive.

Another thing that is needed is to put the following sectors on a more organized and systematic basis:

- Training students in industry
- Participation of representatives from several parts of industry, with a view to studying the issues that concern the analytical programmes, the equipment of workshops and the special teaching rooms, and the needs for training as well.
- Further-training of trainers and technologists at the appropriate industrial units.
- Education and training of artisans from Industry and small-sized enterprises through afternoon and evening-shift programmes in STVE schools.

8 Administrative restructuring and support of management staff in STVE

It is mandatory that the STVE management is restructured and its staff supported so that it can respond successfully to the challenges of our times and to our European orientation.

The administrative restructuring and support of staff should aim at the allocation of duties of the STVE management to the following specialized sectors:

- Research and Programme Development
- Teaching Staff
- Administration and Economics.

The grouping of activities of the STVE management will give us the opportunity to:

- guarantee a more effective management, development and utilization of workforce
- provide the possibility of evaluation of the new trends and developments in education, the economy and society so that they can be adapted to our society.

All this is the answer to the challenges of the socio-economic and cultural changes of our time.

I wish every success to the deliberations of this Symposium and we eagerly anticipate receiving the conclusions of the Symposium to utilize them in the framework of our endeavours to redesign, restructure and modernise Technical and Vocational Education and Training in Cyprus.

We believe that during the educational reform, what is to be guaranteed is that Technical and Vocational Education and Training should not have only the same, but probably more rights than the other levels of the Educational System.

We should also take into consideration the improvement and appeal of the programmes and the status of certificates of Secondary Technical and Vocational Education and Training.

11.4 The Role of Education in Economic Growth
by Mr Nikolaos Christodoulakis

Mr Nikolaos Christodoulakis is Deputy Minister of Finance of Greece and Professor of Economics at Athens University of Economics and Business. At the occasion of the closing dinner of the Symposium, he gave the following presentation

Ladies and Gentlemen,

Economic growth and development is one common objective for all countries in the world. But how can this common objective be fulfilled? Very often policy makers concentrate and direct their efforts in two main areas.

First, they try to increase private and public investment in physical capital. Through private investment, enterprises respond to the increasing supply by introducing new technology and by producing new products and services. Public investment, on the other hand, assists in the building of the necessary infrastructure mainly in transportation, telecommunication and energy and, therefore, it creates a favourable environment for private activity.

Second, they try to employ the labour force in order to cover the new jobs. If, at a certain point in time, the domestic labour market in a country is at a shortage and can not cover all the production, migration takes place and foreign workers participate in the domestic labour market.

Therefore, a higher level of economic development is supposed to be achieved by an increase in the physical and human capital. Although this remark seems to make quite a good sense, a closer look at the factors that affect economic development might lead us to different conclusions.

In almost any country of the world and in any period of time, we find that growth is much higher than the contribution of growth of both physical capital and of total employment. Let me give you an example taken from the Greek experience. During the last 30 years the size of the Greek economy has multiplied by nine, which means average annual rates of growth of around 5%. The contribution of the growth of physical capital is 2.3%, while the contribution of the growth of labour is much lower. We can easily conclude that a large part of the economic development cannot be explained by the growth of factors of production, capital and labour. The analysis of this phenomenon represents one of the greatest challenges in economic policy making.

Since a large part of economic development is not due to the simple accumulation of factors of production, it is obviously due to the increase in the average productivity of the factors of production. It is well known, however, that the average productivity of capital tends to be stable over time.

Some numbers here help to make things clear. During the period of high economic growth (of around 6% annually in the 1960s) of the Greek economy, labour productivity contributed to more than half of this growth rate. During the period of slow economic growth (of 1-2% annually in the 1980s), labour productivity was not increasing and did not contribute at all to the growth of the economy. Therefore we observe that the high rates of productivity of human capital contribute to the high rates of growth of the economy. When labour becomes less efficient, then the economy faces the risk of stagnation.

This observation, which is true for all periods of time, is much more valuable today for two reasons.

First, because today the advanced economic activity is based on scientific knowledge, and on skilled labour which is able to understand and apply new technology. The production of new technology during the recent years, as well as the dramatic increase of the quantity and speed of information, has induced some analysts to use the term "Knowledge Economy" or "Information Economy" in order to characterize the economic activity.

Second, the new international environment and the opening-up of new markets worldwide require a human capital able to take strategic decisions, to organize activities in new environments and to face new problems in previously unknown conditions.

But how can we increase the productivity of human capital? The answer is clearly through education. Education, the most easily measured form of human capital, is, like land and other forms of wealth, a national asset. In today's global markets, it is a scarce asset, and can therefore generate income for both the nation and its owners. But it is also a special asset in two respects. First, once acquired, it cannot be alienated from its owner. Second, if the level and quality of education is not sufficient, other assets such as land and physical capital decline in the economy.

One might distinguish, at this point, between the stock of knowledge and its embodiment in workers and organizations. The stock of knowledge available to an economy depends on its own investments in generating knowledge (scientific research) and its access to knowledge in other economies around the world. The knowledge embodied in workers and organizations in

an economy depends on investments in education, training, and other forms of knowledge dissemination.

An indisputable result of recent economic studies is that a higher level of education at the beginning of each period is boosting good growth for that period. In fact, in a recent report, the International Development Bank identified the lag in education as the greatest obstacle to future growth in the global market. It estimates that if the workforce had one more year of schooling than is expected from current trends over the next decade, the average growth rate could rise by more than 1.5 percentage points annually.

There is also evidence that the unequal distribution of education constrains growth. Analysis suggests that, taking into account the level of education, greater inequality in the distribution of education is associated across countries with lower overall growth. Finally, low and unequal human capital accumulation also exacerbates income inequality. Across countries there is also evidence – not surprising – that the lower average education of the workforce and its unequal distribution each disproportionately reduce the income growth of the poorest.

Ladies and Gentlemen,

In the past we used to compare different levels of current economic welfare between countries by estimating the number of cars per 1000 inhabitants, or the number of TVs per 1000 inhabitants. Today, if we want to make accurate comparisons for future welfare, we should base our estimations on the number of computers per classrooms or the number of patents per industry.

Training and education of human capital in new technical knowledge should be primarily based on information technology and should be accompanied by the knowledge of the interrelations of the international markets. Information technology allows people to extend the narrow basis of their profession, to expand their activities and, therefore, to increase their incomes.

Enterprises should give great attention to "knowledge investment" and the state should support such types of investment. Firms should offer on-the-job training and should give incentives to workers to upgrade their skills. The modern enterprise should create Knowledge Department next to the Production and Marketing Departments. This will be a specialized department aimed at collecting information on new technology and diffusing it to its workers. Production will become more efficient, and competitors will not be able to copy the acquired skills. Enterprises should be convinced that workers' knowledge is an important competitive advantage in the international market.

Today, entrepreneurs should have in mind that the financial value of a firm that is "Knowledge Intensive" might be 10 times higher than the value of its real assets. This is because the competitive structure and the production capacity are determined to a great extend by the quality of the accumulated knowledge.

Ladies and Gentlemen,

Investing in human capital is a critical factor for our economic growth. A country that lacks physical capital like factories and roads suffers from a material gap that can be remedied within a generation. But a country that lacks the knowledge used to create added value in a modern economy suffers from a gap that needs many more generations to fill. If we want to increase the prospects of welfare for every nation, we must strive with all our resources to narrow this gap as much as possible and as soon as possible.